the OIL AND GAS JOURNAL

JUN 30 1939

JUNE 29 1939

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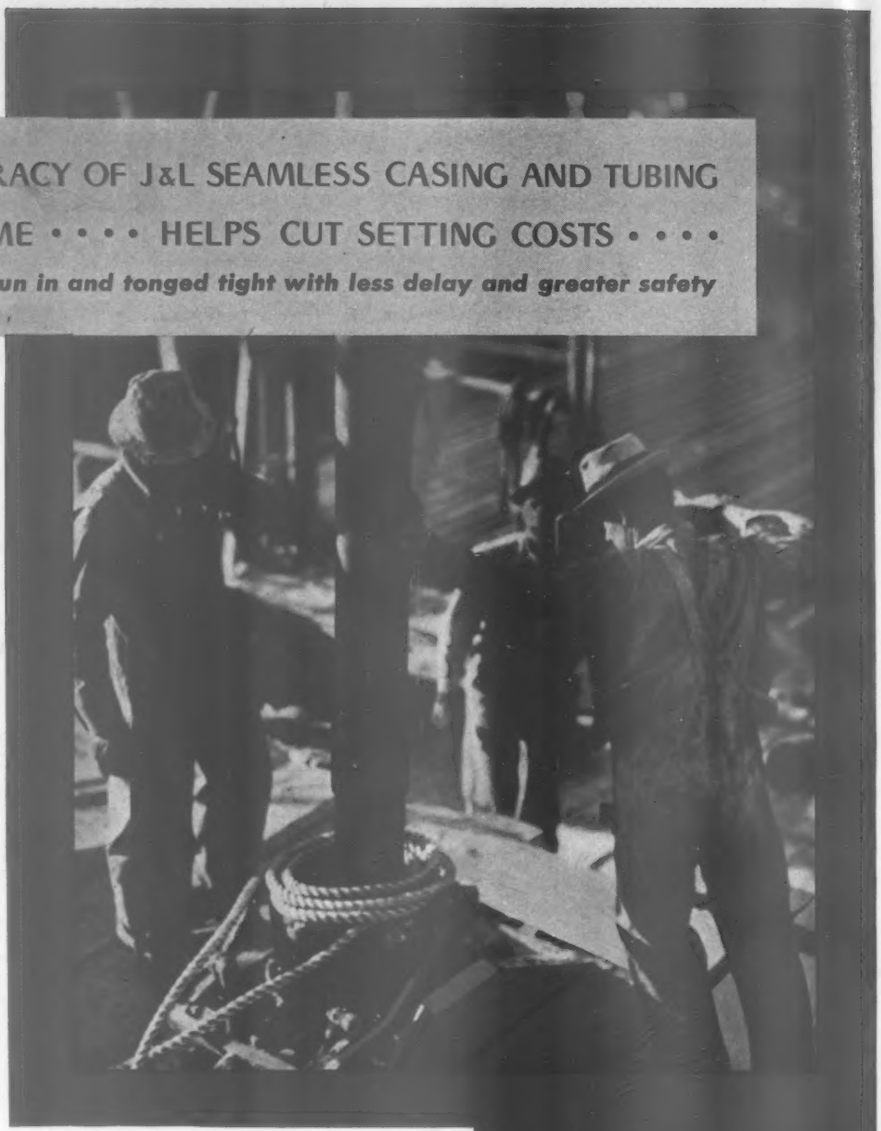

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The Oil and Gas Journal

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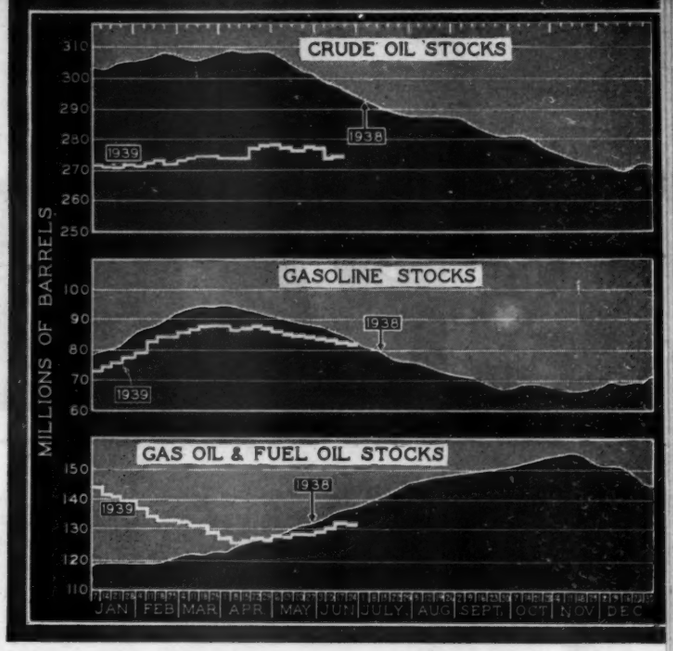
Trends

Several Favorable Factors in Market Outlook for July



ALTHOUGH the failure of recent increases in gasoline tankcar and tankwagon prices to meet support in all areas has brought a feeling of uncertainty in some quarters, market observers are able to point to several favorable factors in the outlook for next month, which starts Saturday. So far as the movement for the needed higher gasoline price levels is concerned, it has not been the failure that many have assumed. Prices have been reduced to former levels in several sections because important marketing organizations failed to meet the advances. However, it was estimated that the half-cent increase in gasoline prices announced in 42 states by the Sinclair Refining Co. 2 weeks ago, is still 65 per cent effective. In part of the area where the increase failed to hold smaller upward price adjustments have been made effective. There is reason to believe that the companies which made these increases will announce additional advances applying particularly to subnormal points. In this connection it has been pointed out that the policy of making gasoline price increases covering a wide area, as was the usual practice during the twenties and early thirties, has not been customary over the past 2 years. The plan of most companies has been to make local changes, based on local conditions. Local advances, if they are supported, gradually spread to other areas.

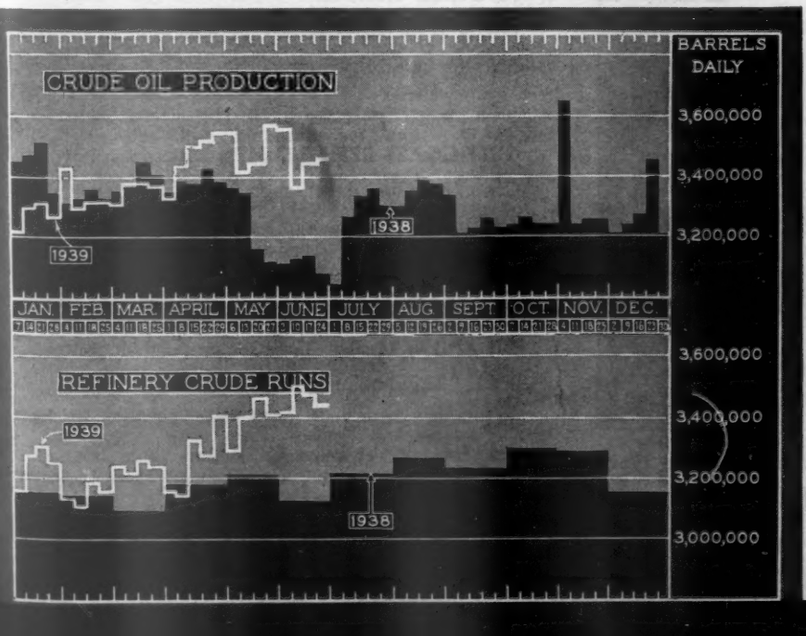
CRUDE PRODUCTION *3,463,656 bbl. daily average—up 12,093 bbl. One year ago 3,079,389 bbl.*

CRUDE STOCKS *274,852,000 bbl. as of June 17—up 160,000 bbl. One year ago 295,931,000 bbl.*

GASOLINE STOCKS *81,733,000 bbl. as of June 24—down 924,000 bbl. One year ago 82,054,000 bbl.*

GAS AND FUEL OIL STOCKS *131,823,000 bbl. as of June 24—down 12,000 bbl. One year ago 136,949,000 bbl.*

REFINERY RUNS *3,430,000 bbl. daily week ending June 24—down 50,000 bbl. One year ago 3,129,000 bbl.*



The gasoline price increases of the past 2 weeks have been helpful and if satisfactory producing and refining operating levels are maintained during July, market students are confident that the trend toward higher levels will spread to other areas.

Regarding July, the Bureau of Mines estimates gasoline demand 6 per cent higher than the normal demand in July of last year. This is a small increase over June of this year and July of last year. The demand outlook for other products is considered favorable.

While the July allowables of all states have not been announced, present indications point to an average daily production which will be slightly less than in June. If this schedule of operations materializes the production will be less than the demand and there will be further reductions in crude stocks. Those in closest touch with conditions are hopeful that refiners will do their part and not return to the peak operating levels of early June, thus enabling them, as a unit, to bring about greater reductions in gasoline stocks and also prevent a too rapid accumulation of fuel oil, distillate and gas oil.

An Independence Day holiday period, which in some cases will extend from Friday night to Wednesday morning, is expected to bring the largest motor fuel consuming period of the year. Heavy tankcar shipments over the past week in anticipation of this demand have been reported in several refining areas.

DAILY AVERAGE PRODUCTION FOR WEEK

	June 24 1939	Bur. Mines June est. of demand	June state allowables	June 17 1939
Oklahoma City	108,125	.....	.....	110,775
Seminole area	47,600	.....	.....	25,500
Remainder of state	303,025	.....	.....	317,200
Total Oklahoma	458,750	450,300	428,000	453,475
East Texas	372,748	.....	.....	372,548
West Texas	217,750	.....	.....	217,146
North Central Texas	118,000	.....	.....	117,549
Texas Panhandle	69,496	.....	.....	64,497
East Central Texas	92,898	.....	.....	90,100
Gulf Coast Texas	339,595	.....	.....	334,398
Southwest Texas	98,352	.....	.....	98,200
Total Texas	1,308,839	1,427,300	1,313,022	1,294,438
North Louisiana	73,585	.....	.....	73,815
Gulf Coast Louisiana	196,500	.....	.....	196,750
Total Louisiana	270,085	265,000	263,023	270,565
California	608,750	594,600	588,000	614,750
Kansas	168,025	152,400	165,880	168,550
Arkansas	56,500	54,700	57,641	57,555
Eastern fields	96,400	106,400	.....	96,100
Illinois	232,436	174,300	.....	234,516
Michigan	66,591	53,400	.....	66,784
New Mexico	116,800	117,000	113,000	116,730
Rocky Mountain area	80,480	95,600	.....	78,100
Total United States	3,463,656	3,491,000	.....	3,451,563

SPARKS . . . FROM THE NEWS

MAINTAINS POSITION: The Hittle field maintained its prominent Kansas position with a 10,000-bbl. completion.

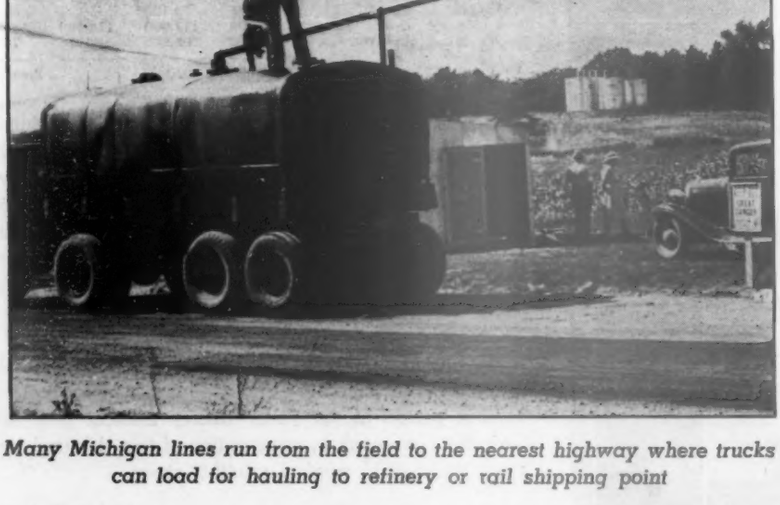
PIPE LINE YEAR: Lines recently completed and those under construction add up to one of the most active pipe line construction periods in several years.

LOUISIANA EXPOSE: Louisiana's political expose may reveal before it ends why that state has been slow in adopting and enforcing adequate proration regulations.

THE TEST: They are saying that the test of how much a marketing company wants profitable prices for its products comes when a competitor posts a half-cent advance for gasoline.

DECISION ANALYSES: Discussions of recent court decisions in Texas indicate there should be a second court to determine the operating significance of the legalistic pronouncements.

By PIPE LINE, ROAD AND RAIL



Many Michigan lines run from the field to the nearest highway where trucks can load for hauling to refinery or rail shipping point

POSSIBLE ENTRY: With a promising showing in a Maricopa County test, Arizona may shortly enter the list of oil-producing states. Possible lower pays are to be tested.

WELL TO STATION: Separated somewhat from the rest of the industry, Michigan's expanding oil operations extend from the well to the filling station.

RAILWAY OIL: With 20 producing wells on its right of way and heavy tankcar shipments, a bankrupt short-line railway in southern Illinois now has an enviable earning position.

ON THE SIDELINES: Many West Texas operators are on the sidelines awaiting results of tests in the "between" areas of Wasson and Bennett fields of Yoakum County.

EXPLODED THEORY: Testimony at Washington hearing last week once more exploded the contention that marketing divorcement would be beneficial to anyone except those who thrive on chaos. Support for the plan is largely confined to a small jobber group.

ANOTHER HURDLE: California's new regulatory law is to be subjected to a referendum. A previous act was killed by voters.

GULF COAST REFINING: Formation of a new Gulf Coast Refiners Association reflects increasing importance of independent refining industry in that section.

OIL AND WATER: A statistician has calculated that the 18,027,253-bbl. first-year production of Salem field in Illinois is approximately equal to the water-storage capacity of Lake Centralia, which is located within the field.

Many Projects Make 1939 Busy Pipe Line Year

By W. T. ZIEGENHAIN

Pipe lines, the life belt of the petroleum and natural gas industries, have continued to expand during the first 6 months of the present year in an endeavor to keep up with the changing panorama caused by recent field discoveries. Since the first of the year there has been a total of $25,000,000 worth of pipe lines constructed or started in the United States and Canada. Announcements of several large proposed projects have been made. The near completion of two large South American pipe lines has attracted attention to the industry.

The estimated aggregate construction of new pipe lines to carry crude oil, refined products and gas totals 2,330 miles. In all, 41 new lines are involved.

The value of the oil lines to any particular area cannot be judged by the length of the new line. A comparatively short line may be the outlet necessary to stimulate activity or make profitable the operations in a certain field. It may add service to many more miles of pipe line. Thus the 65-mile 6-in. line recently completed by Sinclair-Prairie Pipe Line Co. from the K.M.A. field of Texas to Jacksboro, Tex., has provided that field with a much-needed outlet.

Nineteen of the new lines are shorter than 30 miles; 16 of these are crude lines; two are short gas lines, while the third is a gasoline trunk line.

Proposed Lines

Although the aggregate of actual construction presents an impressive total it is not so large in comparison with proposed projects, some of which may be erected as soon as legal entanglements are unraveled. The proposed $20,000,000 gas line from the Hugoton, Kans., gas field to the Mesabi range in Minnesota is still dependent on the outcome of hearings before the Federal Power Commission. The Kansas Pipe Line & Gas Co. and the North Dakota Consumers Gas Co. application for permission to build the line has been made, but coal, railroad, and gas interests serving adjacent areas have protested. The next hearing on the matter is scheduled for June 29.

Two contemplated Canadian projects should interest pipe line construction men. They are the crude oil line from the Turner Valley to Fort William at the head of the Great Lakes where a terminal for shipment to eastern Canada and foreign countries will be built. If installed this line will be a 12-in. and will cost $32,000,000. A complete survey has been made and formal approval is awaiting the visit of British capitalists.

The second Canadian project calls for laying 500 miles of line from the northern foothills west of Peace River in northern British Columbia. It is contingent upon the success of oil development in that area. The terminal would be located at Bella Coola on the British Columbia Coast.

New major oil line erection has been prompted by discoveries of the past several years in the areas east of the Mississippi, including Illinois and Michigan. Approximately 40,000 bbl. are being shipped from Illinois in tankcars awaiting the completion of three major oil lines totaling 500 miles of 10-in. pipe by the Socony-Vacuum Oil Co., Inc., the Texas Co. and the Sohio Corp. (The Oil and Gas Journal, June 15, 1939, p. 31). The former Tide Water Oil Co. 6-in. line through Indiana, Ohio and Pennsylvania may be enlarged. This line to the Pennsylvania border will pass to the Sohio Corp. on July 1 as a result of a recent purchase.

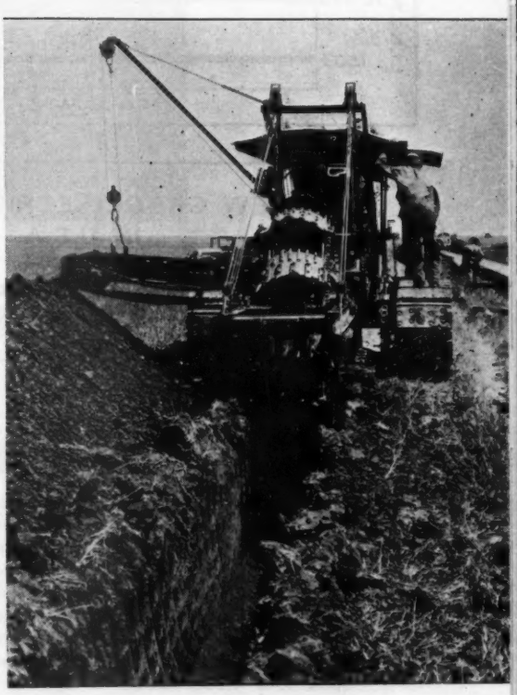
Oil developments in eastern Illinois and southwestern Indiana are becoming increasingly important and may warrant the attention of the transportation department before long. While the new Sohio line from Noble to Stoy will be an aid to this territory, gathering and feeder systems will be needed in Wabash, White, Edwards and possibly Gallatin counties, Illinois, and in Posey and Gibson counties, Indiana.

The western Michigan development which accounts for approximately one-third of that state's present production may warrant the installation of a major pipe line now that the proration in that state may enforce more conservative producing methods and maintenance of reserves. At present the fields are served mostly by short lines to rail shipping points. Gas development may also lead to installation of gas transmission lines in that area.

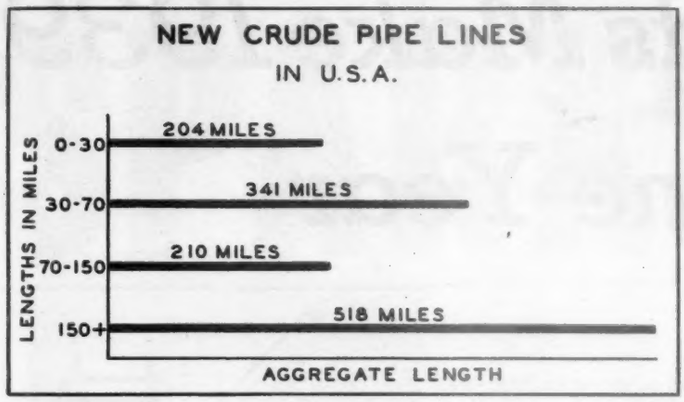
Natural Gas Lines

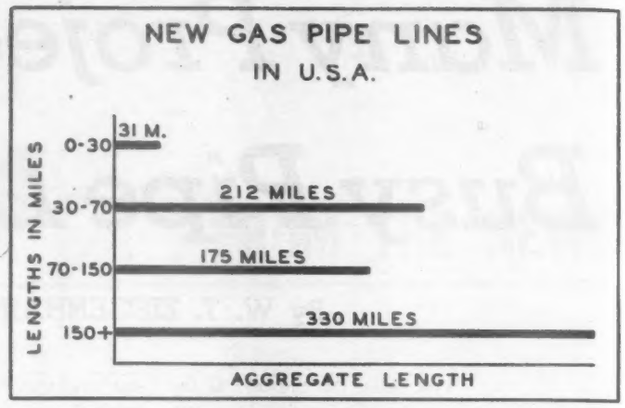
New gas pipe line construction is the outgrowth of the discovery of large gas reserves in several areas coupled with the desire of many large communities to secure a cleaner and cheaper fuel. The State of Kansas alone has an estimated reserve of 14½ trillion cubic feet, which is 142 years' supply at a rate of withdrawal of 100 billion cubic feet annually. (The Oil and Gas Journal, Apr. 27, 1939, p. 28.) A result of the gas development in the North Cut Bank field, Montana, is seen in the proposed 300-mile line to Spokane, Wash., where there is a potential market for 50,000,000 cu. ft.

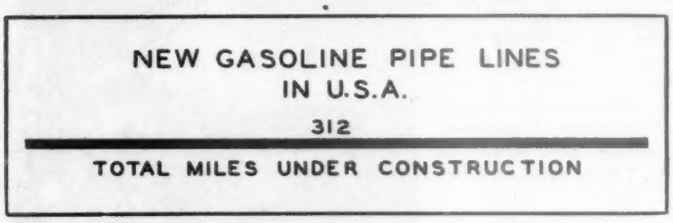
The area east of the Mississippi has an inadequate reserve of natural gas at present and for that reason the commodity brings a high price at the well in comparison to Mid-Continent and Texas production. No reserves have been uncovered in Illinois to compare with Michigan's recent discoveries but it is highly probable that the search for oil will uncover profitable gas production. A well near Carmi, Ill., blew out last week while attempting to plug back and flowed an estimated 15,000,000 cu. ft. daily; some esti-

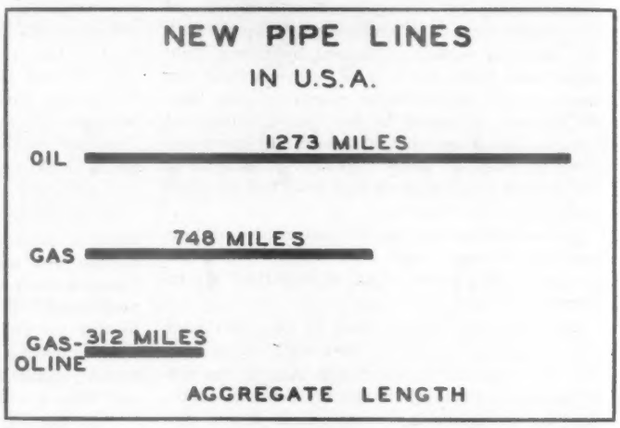


Upper: New pipe line construction covers a wide front. This ditcher is digging trench for a large line. Lower: Laying 10,000 ft. per day of 22-in. pipe for a major gas trunk line system









Graphic study of new pipe line construction divided according to length and service

mated the flow at a much larger amount. If this should prove to be a field of any extent, it would find a ready market in the densely populated and industrial Middle West.

Nearly $100,000 of new gas pipe line construction was recently announced in Michigan and construction of the lines is now or soon will be under way. American Michigan Pipe Line Co. is building 30 miles of 8-in. line from the Freeman-Redding (Van Horn) field in Clare County to the end of its present line in the Austin field in Mecosta County at a cost of $219,000. The gas is marketed in Muskegon. Ann Arbor, Mich., will be served by a new 21-mile spur line from Milan where it ties in to the Panhandle Eastern-Detroit Natural Gas Co. 22-in. line from the Hugoton field, Kansas, to Detroit. The spur will cost approximately $128,000. Northern Pipe Line Co. is building 55 miles of 8-in. line from the Clayton field in Arenac County to Midland, Mich., at a cost of approximately $250,000.

Two natural gas lines, one east of the Mississippi and the other west of the Mississippi, have been proposed since the first of the year. North Dakota Consumers Gas Co. applied for permission for a system from Mandan, N. Dak., to 32 North Dakota cities which would call for 250 miles of line at a cost of about $4,250,000. The General Pipe Line Corp. applied for a permit for 180 miles of 20-in. line from Kentucky and Indiana gas fields to Indianapolis, Ind. The system would also include 40 miles of smaller lines.

Gasoline Pipe Lines

Although the total mileage of new gasoline lines in the United States appear at a relatively small figure when compared with crude oil lines and gas lines, the laying of new gasoline lines is an ever-increasing factor. In the accompanying graphs the relative number of miles of each appears but the data present a less favorable conclusion regarding gasoline lines than could be assumed if an important construction job of converting a long crude oil line to gasoline service is made a factor in the survey. The line referred to is that of the Shell Pipe Line Co., reaching from the Shell refinery at Wood River, Ill., to its abandoned refinery at East Chicago, Ind. This line is approximately 260 miles long and had been in service supplying the refinery at East Chicago with crude from the Mid-Continent fields. Its conversion to gasoline and other light-oil service will permit the company to keep stocks of all light oils at the company's terminal storage on the old East Chicago refinery site. From here the oil may be shipped by tanker or rail to Great Lake ports and to points carrying favorable freight rates out of Chicago. This line will be capable of supplying up to 25,000 bbl. of gasoline or other light oils daily. The capacity of this line, coupled with that of the Great Lakes Pipe Line Co. and that of the new Illana Pipe Line Co. which is now under construction from East St. Louis, Ill., to East Chicago will provide the Chicago area with daily potential gasoline pipe line deliveries of from 70,000 to 80,000 bbl.

While the great bulk of the new gasoline pipe line construction is within the State of Illinois an important 6-in. gasoline line will be laid between Hartford, Conn., and Springfield, Mass. This line will augment the Socony-Vacuum system which leads from the company's refinery at Providence, R. I.

Sinclair Advances Are About 65 Per Cent Effective

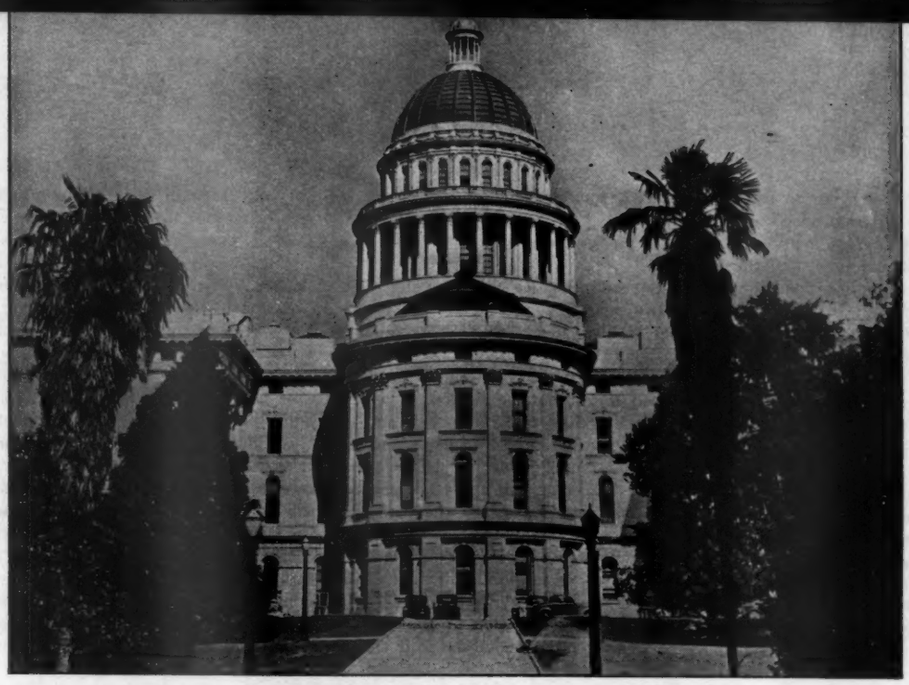
NEW YORK, June 27.—It is estimated that the half-cent advance in tank-wagon gasoline prices instituted by Sinclair Refining Co. June 14 in 42 states in which it operates are about 65 per cent effective at the end of 2 weeks. Failure of other important companies to meet the Sinclair increases in certain regions resulted in withdrawal of advances by many companies which did meet them and in some cases withdrawal of advances by the Sinclair company itself. Sinclair has adjusted its tank-wagon prices in most of the Standard of New Jersey and middle western (Standard of Indiana) territory and in the New York and New England area to meet local conditions.

Contrary to some reports, the Texas gasoline market is a half cent to a full cent per gallon above levels prevailing in the first part of June although the half cent tacked onto advances by Magnolia and the Texas Co. on June 12 and 13 by Sinclair has been rescinded. Much the same condition prevails in New York and New England, where Socony-Vacuum raised prices on an average of three-tenths of a cent a few days before the Sinclair increase became effective.

The New York and New England market has settled to the levels established by Socony-Vacuum and the same condition prevails in the Standard of Indiana territory.

Well in Arizona Estimated Good for 200 Bbl. a Day

PHOENIX, Ariz., June 26.—Col. Samuel F. Reaves No. 1 Fuqua, NW cor. NE Section 30-1n-4w, in Maricopa County, had an oil sand at 1,722 ft. and today was drilling below 2,000 ft. D. A. Holm, geologist for the Arizona State Land Department, estimates the well is good for 250 bbl. a day from the sand penetrated, but it has not been given a production test. There was at least 20 ft. of sand thickness. The oil is said to be of "fairly high" gravity. If this well is developed into a commercial producer, it will be the first in the state.



California Conservation Act May Face Referendum

By L. P. STOCKMAN

LOS ANGELES, Calif., June 26. For the second time in less than a decade the California legislature has passed a regulatory oil control bill, and, according to well-founded information, it will be subjected to a referendum for a second time in the same interval of time. The finances necessary to initiate the referendum were subscribed in less than 24 hours and the objective is the securing of a minimum of 200,000 names of qualified voters. Approximately 130,000 valid names are required to stay execution of the oil control bill until the electorate votes on it.

The new bill passed by the assembly and senate after a hectic period was introduced by Assemblyman Atkinson on January 24, 1939, but it is hardly recognizable in its present form, having been amended March 14, April 21, May 2, May 25 and again on June 7. This bill was once passed by the assembly and then referred back to the committee on oil industries. It was once again passed out of the oil industries committee with a "do pass" and returned to the general assembly. In the meantime, Senator Wagy of Kern County introduced his S.B. 1269 designated as the Oil Prorate Act of 1939 and the senate promptly passed it. After passage of the assembly bill for the second time a Democratic caucus decided to concentrate on its passage through the senate as Governor Olson indicated he would not sign the Wagy bill even if passed by both houses. The final outcome came in the last minutes of the session of the legislature with the clocks stopped when sufficient votes were mustered in the senate to secure passage.

The Atkinson measure, designated as the California Oil and Gas Control Act of 1939, is an act "relating to the conservation, regulation and stabilization of the production and distribution of crude oil and gas and the products thereof, and creating an oil and gas conservation and control commission." Attention is called to this particular reference to stabilization of the production and distribution of oil and gas and the products thereof. This means the commission can regulate production and distribution of crude and refined products, which will indirectly affect crude and refined prices. This is the closest approach to a utility status it can go without definitely creating the oil industry as a public utility. The commission is to consist of the director of nautral resources, the director of public works and the director of finance. These three, if the act becomes operative at the end of the usual 90-day period after signature, will run the oil industry in California although the director of natural resources is to be the chairman and administrative officer, receiving in addition to his regular salary of $8,000 per year an additional $4,000 annually. Rumors around Sacramento, the state capital, are that Governor Olson will appoint Richard Olson, his son, as director of natural resources in the near future.

The new act specifically prohibits surface and undeground waste and gives the commission authority to determine reasonable market demand and allocate allowable production to each field in the state.

Underground waste is defined as "Underground waste as those words are generally understood

Provisions of the Bill

The bill prohibits overproduction of crude oil, surface and underground waste, establishes 25 bbl. daily minimum for curtailment and provides penalties for violations. It takes administration of the act out of the oil industry's hands whereas the Wagy bill recognized the Central Committee of California Oil Producers as the official advisory body.

The commission would have the following authority: (1) allocation of field and well allowables; (2) confiscation of illegal or hot oil; (3) establishment of drilling units, which involves well spacing; (4) collection of data; (5) limitation of production of crude oil and gas to demand; (6) authority to regulate distribution of refinery products when made from crude produced in excess of prescribed limit; (7) power to issue certificates of clearance or tenders on transportation and handling of crude and products; (8) power to test all oil and gas wells, plants, tanks, refineries, transportation facilities and equipment; (9) power to examine properties, leases, books and records, and (10) hold hearings and issue subpoenas.

in the oil business and in any event to embrace the inefficient, excessive, or improper, use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recoverable from any pool."

Surface waste is defined as "Surface waste as those words are generally understood in the oil business, and in any event to embrace the unnecessary or excessive surface loss or destruction without beneficial use, however caused, of natural gas, crude petroleum oil or any product thereof, but including the loss or destruction, without beneficial use, resulting from evaporation, seepage, leakage or fire, especially such loss or destruction incident to or resulting from the manner of spacing, equipping, operating, or producing, well or wells, or incident to or resulting from the use of inefficient storage or from the production of crude petroleum oil in excess of the reasonable market demand."

Certificates of Clearance

The commission has been authorized to issue tenders or certificates of clearance if it is deemed necessary to differentiate between legal and illegal oil. It is provided that "The commission is specifically authorized and directed to make such rules, regulations and orders, and may provide for such certificates of clearance or tenders, either generally or in particular areas, as may be necessary to make effective the prohibitions contained in this act." Section 13, to which this clearance pertains, is that "The sale or purchase or acquisition, or the transportation, refining, processing, or handling in any other way, of crude petroleum oil, in whole or in part, produced in excess of the amount allowed by any statute of this state, or by any provision of this act, or by any rule, regulation or order of the commission made thereunder, is hereby prohibited, and such oil or commodity is hereby referred to as illegal oil. The sale or purchase or acquisition, or the transportation, refining, processing, or the handling in any other way, of any product of crude petroleum oil, which product is derived in whole or in part from crude petroleum oil produced in whole or in part in excess of the amount allowed by any statute of this state, or by any provision of this act, or by any rule, regulation or order of the commission made thereunder, is hereby prohibited and in each such commodity or product is herein referred to as illegal oil product to distinguish it from legal oil product."

Investigation

On of the most important sections is Section 20, which provides that "It shall be the duty of the commission to investigate and collect complete data with reference to present and potential production and the extent of oil and gas resources in the state; methods of drilling and production operations; methods of transportation of oil and gas and their products; methods of refining and of marketing and distributing oil and gas and their products; the extent and service given by existing pipe line and other oil and gas transportation facilities; prices at which oil and gas and their products are sold to consumers; and generally all facts and matters material to the conservation, and to the general public interest in the production, distribution and consumption of oil and gas and their products. For the purpose of further carrying out the general public policy set forth in Section 1, the commission shall make a report to the governor and to the legislature of its findings material to the consideration of further legislation for carrying out said policy."

Penalties

Severe penalties are provided for violations: "Any person who violates any provision of this act or any rule, regulation or order of the commission made hereunder, shall, in the event a penalty for such violation is not otherwise provided for herein, be subject to a penalty of not to exceed $500 a day for each and every day of such violation, and for each and every act of violation, such penalty to be recovered in a suit in the superior court of the county where the defendant resides, or in the county of the residence of any defendant if there be more than one defendant, or in the superior court of the county where the violation took place. The place of suit shall be selected by the commission and such suit, by direction of the commission, shall be instituted and conducted in the name of the commission by the attorney general or under his direction by the district attorney of the county where the suit is instituted. The payment of any penalty as provided for herein shall not have the effect of changing illegal oil into legal oil, or illegal oil product into legal product, nor shall such payment have the effect of authorizing the sale or purchase or acquisition, or the transportation, refining, processing or handling in any other way, of such illegal oil or illegal oil product, but, to the contrary, penalty shall be imposed for each prohibited transaction relating to such illegal oil or illegal oil product. Any person aiding or abetting any other person in violation of any statute of this state relating to the conservation of oil and gas, or the violation of any provision of this act, or any rule, regulation or order made thereunder, shall be subject to the same penalties as are prescribed herein for the violation by such other person."

Established Minimum

The bill sets an allowable of 25 bbl. per day for stripper wells which will not be forced to curtail. This section provides: "Whenever, to prevent waste, the commission limits the total amount of crude petroleum oil to be produced in this state, it shall allocate or distribute the allowable production among the fields of the state. Such allocation or distribution among the fields shall be made on a reasonable basis, giving, if reasonable under all the circumstances, to each pool with small wells of settled production, an allowable production which will prevent a general premature abandonment of the wells in the field, but in no event less than 25 bbl. per well per day. No rule, regulation or order of the commission shall be such that it will occasion a premature abandonment of any well or wells having a small settled production, or wells producing large quantities of water, and to prevent waste which would be caused thereby the commission shall by order permit production from such wells in an amount necessary for the economic operation thereof, and shall not restrict the production of stripper or marginal wells producing large quantities of water, when to do so would cause premature abandonment thereof."

Drilling Restrictions

"No owner of a property in a pool should be required by the commission, directly or indirectly, to drill more wells than are reasonably necessary to secure his proportionate part of the production. To avoid the drilling of unnecessary wells, a proration unit for each pool may be fixed, such being the area which may be efficiently and economically drained and developed by one well; provided, however, that in those pools which, prior to the effective date of this act, have been developed to an extent of more than one well to each five acres of the pool so that it would be impracticable or unreasonable to establish such a proration unit, the commission shall, after notice and hearing, distribute the allowable production for any such pool among the wells producing from such pool, only upon the basis of the relative potential of such wells; and in any such pool no rule, regulation or order of the commission shall be such in terms or effect as to prevent the owner of one tract within any such pool from drilling wells thereon to approximately the same well density as wells have theretofore been drilled upon adjacent tracts in the same pool. The pooling of properties or parts thereof shall be permitted, and, if not agreed upon, may be required in any case when and to the extent that the smallness or shape of a separately owned tract would, under the enforcement of a uniform spacing plan or proration unit, otherwise deprive or tend to deprive the owner of such tract of the opportunity to recover his just and equitable share of the crude petroleum and natural gas in the pool; provided, that the owner of any tract that is smaller than the drilling unit established for the field, shall not be deprived of the right to drill on and produce from such tract, if same can be done without waste; but in such case, the allowable production from such tract, as compared with the allowable production therefrom if such tract were a full unit, shall be in ratio of the area of such tract to the area of a full unit. All orders requiring such pooling shall be upon terms and conditions that are just and reasonable, and will afford to the owner of each tract in the pool the opportunity to recover or receive his just and equitable share of the oil and gas in the pool as above provided, so far as may be practicably recovered without waste. In the event such pooling is required, the costs of development and operation of the pooled unit shall be limited to the lowest actual expenditures required for such purpose including a reasonable charge for supervision; and in case of any dispute as to such costs, the commission shall determine the proper costs."

Summary

It should be remembered that the act will not become effective until 90 days after signature by Governor Olson and that if the projected referendum results in the securing of 130,000 valid signatures of qualified voters it will not become effective until the general electorate has approved it. It is assumed the same tactics employed ifi defeating the Sharkey control bill several years ago will again be used. For several months the recognized sponsor of the Atkinson bill was the C.I.O. group, but when R. K. Davies, vice president of Standard Oil Co.; Charles S. Jones, president of Richfield Oil Corp., and other large operators stepped in at the last minute opponents of the measure charged it was an oil-company bill. It is improbable it will be approved by the electorate unless it is tied in with the "Ham and Eggs" pension program at a special election in which event the administration might go to bat for both measures. At any rate the bill will not have any effect on curtailment until late in the year, if at all.

Punish Conspiracy to Steal $213,000 Worth of Products

NEW YORK, June 26.—Fines and suspended jail terms were assessed against seven men tried in Jersey City, N. J., last week on a charge of conspiring to steal $213,240 worth of fuel oil and gasoline from the Tide Water Associated Oil Co. Bayonne, N. J., refinery.

East Texas Stay Denied; Ask Larger Allowables

HOUSTON, Tex., June 26.—Denied a stay of judgment from the injunction recently granted by federal Judge R. J. McMillan, of the western Texas District Court, enjoining it from restricting production of Rowan & Nichols wells in the East Texas field to the daily allowable called for under existing proration schedules in that field, the Texas Railroad Commission now is faced with the problem of disposition of requests of several major companies for increases in allowables of their East Texas wells.

Among the companies which have filed petitions for increased allowables in East Texas are Magnolia Petroleum Co., Sun Oil Co. and Humble Oil & Refining Co. Each of these companies, in its respective petition, claims that its production is not in sufficient proportion to its holdings in that field. The Sun petition points out that company owns approximately 5 per cent of the field but is getting only from 3 to 3½ per cent of the production. Humble claims about 14 per cent of the field and that it is not getting anything near that percentage of the total production. In each instance an increase in per well allowable from 20 to 40 bbl. daily is asked.

In view of the court decision in the Rowan & Nichols case, many operators are of the opinion the Railroad Commission may be compelled to grant these requests, which is expected to lead to similar requests from other producers. At the same time, the number of wells involved in the requests already filed is sufficient to result in a substantial upturn in East Texas production should the requests be granted.

Motion of the Railroad Commission for a stay of judgment from the injunction granted in the Rowan & Nichols case was heard before Judge Rufus E. Foster of the U. S. Fifth Circuit Court of Appeals at New Orleans, La., Saturday. The stay was asked pending hearing of the appeal of the case by the Railroad Commission to the higher court.

In denying the stay of judgment, Judge Foster transferred the case for hearing from Fort Worth, Tex., to Atlanta, Ga., this making possible an earlier hearing. He set October 2 as the date for the hearing.

The stay of judgment was asked by the commission as a means, it claimed, of preventing "great inequity, uncertainty and confusion in the East Texas field" pending final decision in the case. The commission declared that, if the order finally were invalidated, it would have a reasonable time in which to formulate and promulgate an order which would comply with the law as settled by the appellate courts and which would be equally applicable to all operators in the field.

Under the injunction granted by federal Judge McMillan, daily production of the five wells of Rowan & Nichols which were involved in the case is increased from 112 bbl. to 220 bbl. The commission claimed at the hearing of the injunction suit this increase would have the effect of destroying rather than preserving the status quo of the East Texas situation.

The executive vice president of the East Texas Oil and Gas Association charged last week that with major companies and other operators in the field seeking allowable increases under the Rowan & Nichols decree the "principles of conservation and proration in the field are being undermined."

"The same oil companies that carried the banner for orderly withdrawal of East Texas oil as a means of conservation in pre-proration days now are back of a movement to wreck the entire foundation of East Texas prosperity," he asserted. He said the combined companies represented about 4,760 wells in the field and some 27,688 acres of productive leases.

"If those companies double their allowables," the association vice president said, "others will want to do the same thing. And it will not be a week before the daily allowable, currently 522,835 bbl., will exceed 1,000,000 bbl. The result would either be 50-cent oil or 3 or 4 idle days each week."

Ickes Anticipates Higher Price

DENVER, Colo., June 26.—A warning given 2½ years ago by Harold L. Ickes, secretary of the interior, that he anticipated higher prices for government royalty oil after January 1, 1940, was put into concrete form this week when he set a price of $1.14 per barrel for the Government's share of production from federal land in the Lance Creek field on and after July 1. This is 4 cents per barrel higher than the Mid-Continent scale for oil of 40-gravity and up, and 37 cents per barrel above the prevailing posted price in the field.

The announcement has resulted in a puzzling situation which may reach the courts and test the legality of the secretary's action. A considerable part of the Lance Creek crude is moved to markets under sales agreements which had the approval of Secretary Ickes. Whether in the light of that approval he has the legal authority to raise the Government's share of the oil to a higher figure is one of the questions involved.

The action of the department chief in raising the price of Lance Creek crude on July 1 was intimated in January, 1937, when the department made a contract, dated January 1, 1937, to run three years for the sale of government royalty oil from the Salt Creek field to Sinclair-Wyoming Oil Co. at 2½ cents per barrel above the Mid-Continent price. The Sale Creek crude under this contract is refined in Wyoming and the necessity for a differential to offset transportation costs to the East was not involved. In announcing the signing of this contract, the secretary said: "It may reasonably be anticipated that stabilized conditions in the petroleum industry at the close of 1939 and the reduction of supplies now held in storage by private parties will enable the Government to dispose of its royalty oil at a higher figure after January 1, 1940." It is believed that the secretary in his move to boost the Lance Creek prices 6 months in advance of the date he named in that statement, had in mind the hope of forcing higher posted prices in the field.

W. H. Ferguson, executive vice president of Continental Oil Co., one of the principal producers in Lance Creek, said his company had the matter under consideration and had not yet determined which course of action it will take. He expressed the opinion, however, that the Government might have some difficulty in disposing of its oil at $1.14 under existing conditions, but that remained to be seen. Arthur Johnson, president of Argo Oil Co., said he did not consider the price anywhere near just.

E. J. Bullock Will Retire; J. F. Hewson Promoted

CHICAGO, June 23.—Concluding nearly 50 years' service with Standard Oil Co. of Indiana, Edward J. Bullock, vice president in charge of purchasing, will retire on June 30. Fifty executives, including Pres. Edward G. Seubert, honored Mr. Bullock at a testimonial banquet at the Bismarck last night.

The company is celebrating its golden jubilee this year and Mr. Bullock looks back to its organization. In August 1889, he obtained a job as office boy for P. C. Hanford Oil Co. in Milwaukee at $3 a week. He became a clerk in January 1890. The company was absorbed by the new Standard company in 1892, and when Mr. Bullock was 30 he was transferred to Chicago as assistant manager of the Standard lubricating department. From 1911 to 1915 he was a sales manager for Atlantic Refining Co. Returning, he was made manager of the Chicago sales division, where he served until 1919. He was selected to manage the purchasing of oils in 1919, made director of all purchases in 1921, and elected a director in 1922 and a vice president in 1927.

On July 1 James F. Hewson, who has been purchasing agent since 1923, will become manager of purchases. Mr. Hewson was graduated from Michigan's engineering school in 1908. After working for other concerns and for the Government he joined Standard in 1917 as an estimating engineer at the Whiting refinery. He was transferred to the general office in 1920.

Pres. E. G. Seubert presenting associates' parting gift to Vice Pres. E. J. Bullock

Revived Interest in Michigan as New Prospects Open

By HARRY F. SIMONS

Reinterpretation of Michigan's structural geology, together with the discovery of shallow oil production at depths ranging from 1,000 to 2,000 feet in the southwestern corner of the state, has caused a renewal of interest in the state's petroleum prospects. The interest is justified by an increase of over 30 per cent in Michigan's crude output during the past eight months. This period has seen the Buckeye field in Gladwin County displaced as the state's leader by two pools, the Van Buren County area with 18,291 bbls. of new production daily and the Freeman-Redding (Van Horn) pool in Clare County with 14,134 bbls. of crude daily from new discoveries. Daily production from fields discovered during the past year now accounts for more than half of the total output of Michigan.

Of the state's total area of 54,480 square miles about two-thirds is potential oil prospecting territory and all of this is in the lower peninsula. The upper peninsula covers about 16,691 square miles and Canadian-Ozarkian, Cambrian and pre-Cambrian formations outcrop or are covered by the Pleistocene glacial drift over most of the area. On the southeastern tip, bordering on Lake Michigan, Silurian and Ordovician formations are found. The entire northern peninsula is generally considered as pre-Cambrian, while the southern peninsula is a basin extending from Lake Superior into Ohio and from Lake Huron to Lake Michigan.

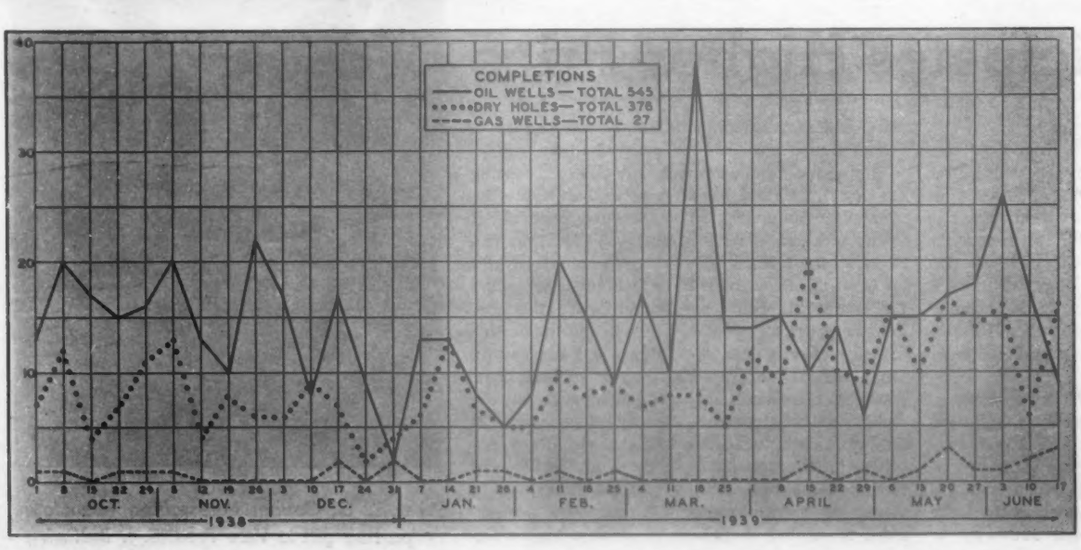
The southern peninsula is covered almost entirely by the glacial drift deposited in Pleistocene time, the drift varying from 0 to 800 feet in thickness. Outcrops of older sedimentary rocks are not numerous. In Osceola, Clare, Gladwin, Mecosta, Isabella, Midland, Bay, Saginaw, Gratiot, Montcalm, Ionia, Clinton, Shiawassee, Ingham, Eaton and parts of the bordering counties, the Pleistocene is underlaid by the Pennsylvanian formations. The Mississippian is found under the drift in the remainder of the basin with the exception of Monroe and Wayne counties in the south and Presque Isle, Cheboygan and Emmett counties in the north where the Devonian is the youngest member under the Pleistocene.

Existence of the Michigan basin has been known for years but its structure was considered to be a rough saucer with the possibilities of oil production located around the edges where there was some indication of local folding. Discovery of commercial production in the Berea sand at about 1,800 feet at Saginaw in 1925 bore out this theory and attracted attention to the state as a source of petroleum. The discovery of an outcrop of the Marshall sandstone in a stream bed in the north central part of the southern peninsula gave geologists an indication that folds within the basin might be a suitable trap for oil.

Investigation of the samples and formation records from wells drilled for brines, as well as oil, disclosed that there was a series of anticlines extending from northwest to southeast across the state. The Dow Chemical Co. disclosed that in several instances it had shows of oil in wells drilled for brine but the crude was an annoyance as its interests were concentrated on the chemicals from the subsurface waters.

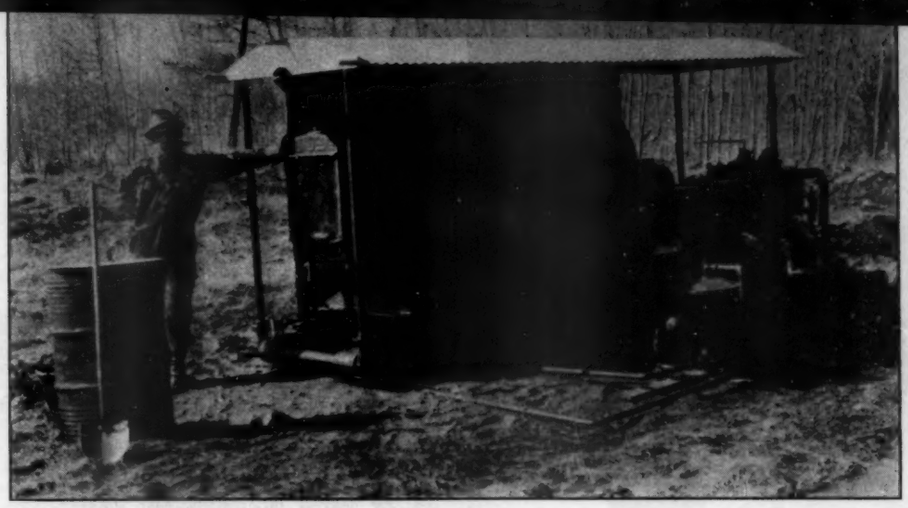
First investigation led to the opinion that there were five or six of these major structural features and prospecting was begun along their flanks. Discovery in February 1928 of the Mount Pleasant field in Midland and Isabella counties attracted attention to the central part of the basin. Production was obtained from the Dundee limestone from 3,500 to 3,600 feet deep, the field produced 20,254,050 bbls. up to the first of 1939 and since then has been producing approximately 1,450 bbls. daily.

Further investigation into the subsurface structure and more drilling of test holes disclosed that there are 32 of these major structural features, many of them unnamed, extending entirely or partially across the peninsula. More may be subsequently located. Since the discovery of the Mount Pleasant field there have been 51 oil pools discovered in the state that were still producing at the close of last year; an indication of the



Left, above: Running casing on a Michigan cable-tool test. The small size of pipe used helps cut down the total cost of the wells

Left: Michigan prospecting methods require the drilling of a comparatively large number of dry holes, as the record of the past 9 months' completions indicates



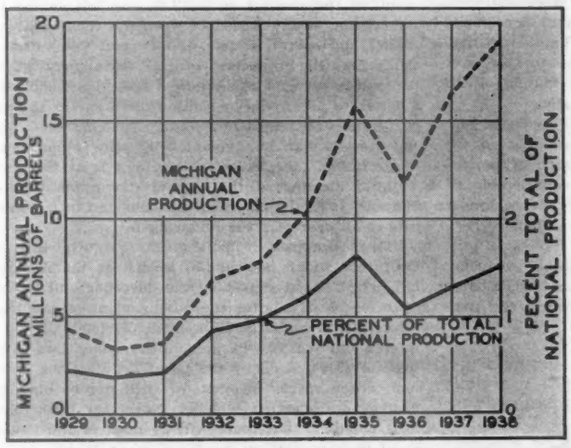
Portable pump on Pure Oil Co. pipe line gathering system in Van Horn field helps handle flush production

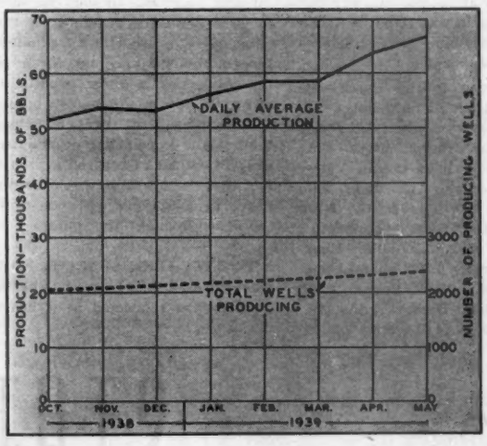
quickening of the tempo in the activity is the discovery of 21 pools during the last calendar year.

Two major developments, the discovery of the Van Horn field in Township 18 and 19n-6w (The Oil and Gas Journal October 26, 1938. Page 25 and April 13, 1939, Page 34) and the shallow discoveries in Allegan, Van Buren, and Ottawa counties (The Oil and Gas Journal April 6, 1938, Page 14) are outstanding. The former may ultimately develop into the most prolific pool in the state and several of its wells have made potentials in the neighborhood of 10,000 bbls. daily.

The search for oil in the central basin has been concentrated along the major anticlines, particularly in the area where there has been some indication of cross-folding. Most of the major folds have their steepest dip basinward. The structure in the southwestern part of the state is much more complex and, in addition to the northwest to southeast folds, there is folding along an axis extending roughly from northeast to southwest. The intersection of the two trends of folding and their extensions are at present attracting the attention of oil operators and geologists and much of the southwestern Michigan production is coming from this type of structure.

C. H. Riggs, petroleum geologist, in the "Geology of Allegan County," published by the Geological Survey Division of the Michigan Department of Conservation, points out that the extreme down-warping of the basin during Salina time may have produced radial folds on the edge of the basin where sediments were thinner. The presence of these folds may have acted as a brace to concentrate the northwest-southeast folds in the central and northern part of the basin during the disturbance which occurred after deposition of the Marshall sandstone. The same movement caused some cross folding in the northeast-southwest folds.





Extreme left: History of Michigan production over the past 10 years in millions of barrels annually and in comparison to national total

Left: Rise in Michigan's production and total wells producing are shown in this chart covering the past 8 months

The area is covered with from 150 to 350 feet of drift and this complicates the problem as interpretation must depend on samples obtained from drilling tests and prospect holes. Discoveries during the past year have come so fast that an accurate determination of the structures has been impossible and it is extremely probable many of the smaller pools may eventually be proven to be one continuous field. On the other hand, several fields that at present show indications of being quite large may ultimately be proven to be two or more separate structures.

Discoveries in 1939 started in January with completion of Gordon & Wilson No. 1 Joppul, SE NE NE Section 11-4n-13w, Allegan County, for a production of 620 bbls. daily after acidizing. Since then eight new fields have been uncovered and one extension of an old field recorded. With two exceptions, all of the new fields have been discovered in the southwestern part of the southern peninsula.

The exceptions are McClanahan Oil Co. No. 1 Nixon, SE SE SE Section 17-16n-3w, Isabella County, which was completed for 500 bbls. on a 13-hour test after striking pay 50 feet in the Dundee limestone. The other discovery was valuable for the potentialities it uncovered. It was Gulf Refining Co. No. 1 Bateson, C S half SE SE Section 2-14n-4e, Monitor Township, Bay County. The well showed for 25 bbls. in the Dundee at 2,950 feet and swabbed 100 bbls. of oil in three days after being plugged back from 3,755 to 3,550 feet in the Monroe limestone and acidized. It marked the first Monroe production on the eastern side of the state although Gulf also obtained Dundee production in two wells in that area late last summer. They were also unusual in that they were the first wells on structure that did not have the upper section of the Dundee removed. The Bateson well found a show of oil in the Sylvania sand at approximately 4,000 feet and was last reported as producing 60 to 70 bbls. daily from the Monroe at 3,800 feet after being plugged back from 4,454 feet.

Other discoveries uncovered Traverse lime production in the southwestern part of the state. In the order of their completion, they are: Carscalla & Anderson No. 1 Longnecker, SE SE SE Section 4-7n-13w, Ottawa County, 100 bbls. in one hour before being shut in (this was the first production obtained in Ottawa County); F. P. Hurt No. 1 Healy, SE NE SE of 71s-14w, Van Buren County, total depth, 1,220 feet in the Traverse lime and producel 1,200 bbls. after acidizing; Smith Petroleum Co. No. 1 Whalen, SW SE SW Section 32-7n-12w, Kent County, acidized the Traverse from 1,790 to 1,850 feet for 400 bbls. daily; C. C. Goff No. 1 Miller, NW NW NE Section 24-1s-14w, Van Buren County, made a potential of 500 bbls. after being acidized at a depth of 1,355 feet in the Traverse lime; Chulsky and Varner No. 1 Brower in the NW SW NW Section 23-3n-12w, Allegan County, in the Traverse lime at 1,625 feet, made 90 bbls. naturally and 225 bbls. after acidizing; Blood & Hendershot No. 1 Ellen Jackson, NE NE NE Section 29-2s-16w, was a small producer in the Traverse at 1,010 feet; Clifford F. Clapsaddle and Lester W. Harris No. 1 Fredrick Been, in the NW NW NE Section 24-1s-15w, Van Buren County, total depth 1,162 feet in the Traverse flowed 50 bbls. naturally and 590 bbls. after it was acidized, and Michigan Devonian Petroleum Co. No. 1 Green, SW SW SE Section 15-4n-13w, Allegan County, extended the Old Salem field to the east when it was completed for 790 bbls. restricted flow from a total depth of 1,584 feet in Traverse.

Most recent important discovery is the Swanson Consolidated Oil Co. No. 1 John Fletcher, SE SW SE Section 32-7n-13w, Walker Township, in Kent County. The well flowed 3,000 bbls. natural from the Dundee at 1,766 feet, total depth.

Gas fields in Michigan are being overshadowed by the oil fields but an increase in natural dry gas for domestic and industrial consumption is shown by the production of over 1 billion cu. ft. in each of the first two months of the year. Recent important discoveries of gas include those in northern Clare County, in and adjacent to the important Van Horn pool; the productive gas area may extend beyond the limits of the oil structure as was indicated by Gulf Refining Co. No. 1 Ann Arbor Railroad, CW NW NW Section 21-18n-5w.

Another important gas discovery was Crown Development Co. No. 1 Johnson, NW NE NE Section 5-6n-12w, Kent County, which struck 9,000,000 cu. ft. of gas in the Berea sand at 1,070 feet. The well blew wild for several days before it was killed and drilling continued for oil.

EARL K. LONG, brother of the late Huey Long, who succeeds Gov. R. W. Leche of Louisiana, resigned, says: "No one in the oil business need have any fear about me. I will cooperate fully with the oil people and the federal Government. I believe in proration. Without it the oil industry would be ruined."

LOUISIANA

LOUISIANA DEPARTMENT OF CONSERVATION on June 23 issued an order establishing the allowable production of crude oil in the state at 264,163 bbl. per day in July. North Louisiana allowable was fixed at 62,553 bbl. and South Louisiana at 201,610 bbl. The June allowable in the state was 263,023 bbl. per day.

The largest allowable is given to the Evangeline (Jennings) field in coastal Louisiana, 25,650 bbl. Other large fields and their allowables were Rodessa, 27,000 bbl.; Caillou Island, 14,850 bbl.; Iberia, 13,000 bbl.; Iowa, 14,000 bbl.; Lafitte, 15,000 bbl.; Cotton Valley deep sands, 7,760 bbl.; Shreveport, 7,193 bbl.; Ville Platte, 8,000 bbl.; Leesville, 4,250 bbl.; Basile, 5,200 bbl.; Bosco, 4,500 bbl.; Charenton, 6,000 bbl.; English Bayou, 4,750 bbl.; Hackberry, East, 5,500 bbl.; Hackberry, West, 3,600 bbl.; Jeanerette, 6,300 bbl.; Lisbon, 3,100 bbl.; Bancroft, 2,400 bbl.; Black Bayou, 3,000 bbl.; Cameron Meadows, 2,500 bbl.; Darrow, 3,150 bbl.; Gibson, 3,050 bbl.; all other fields 74,410 bbl.

OKLAHOMA

THE PHILLIPS PETROLEUM CO. has petitioned the Oklahoma Corporation Commission for permission to repressure the oil sands underlying certain properties in the Nowata County oil fields; namely, Rebecca Wilkerson 110 acres in Section 11-25-16 and Section 2-25-16, F. T. Murray 60 acres in Section 2-25-16, and Wade & McOwen 30 acres in Section 1-25-16. The 200 acres contain 18 wells now producing 6.84 bbl. per day, or an average of 0.38 of 1 bbl. per well per day.

ILLINOIS

SENATOR JOHN J. PARRISH, Centralia, introduced Senate Bill 607 in the Illinois State Senate providing for the creation of a legislative committee of five house and five senate members to study the state's oil business for future legislation. Among the subjects to be considered will be proration.

THE FRIEDLAND BILL, designed to outlaw gasoline price wars in Illinois, passed the house of representatives and was sent to the senate.

Attacked as a "little N.R.A. and a price-fixing code," the measure engendered an hour and a half of bitter debate and argument over recording of votes.

After the roll call was announced 79 to 32, with 77 being required for passage, Representative Lew Wal-

lace (Mattoon) charged that members not in the chamber were recorded on the roll call. When he pointed out one specific instance, Speaker Hugh W. Cross ordered the questioned vote stricken from the record.

The bill would prohibit any retail sales of motor fuel or lubricants below cost, including overhead. Except for delivery differentials, near standard prices would prevail throughout the state.

A FEDERAL GRAND JURY AT DANVILLE, investigating alleged gasoline price-fixing by oil companies in 10 midwestern states Friday June 23 recessed for 60 days. John Henry Lewis, assistant U. S. attorney general, who presented government evidence to the jury, said no report on findings in the oil cases would be made until the jury convenes.

TEXAS

AN ORDER REQUIRING THE OPERATOR of an uncontrolled gas well to drill "such additional wells as may be necessary to kill the uncontrolled well and prevent any further injury to surrounding property from cratering or otherwise, resulting from the blowout," may be entered under the power of the Railroad Commission, according to such jurisdiction given last week by Attorney General Mann. If the commission should enter such an order and it should not be obeyed, then the commission may ask for a receiver to take over the properties, and for penalties for violation of the order, the attorney general's opinion stated.

"Assuming that there is substantial evidence sustaining the conclusion of the commission as to the proper method of controlling the well in question, the fact that the operator would be put to considerable expense in complying with the order would not render the order invalid," the opinion further stated.

TWENTY-ACRE SPACING FOR WELLS producing from the 3,400-ft. sand in the Sullivan City field, Hidalgo County, was requested at a hearing before the commission. Wells would be spaced 330 ft. from lease lines and 660 ft. apart. For deeper distillate production from the 3,900-ft. horizon, the operators asked that the commission permit only one well to 160 acres. Operators explained that the operation of these wells would require recycling of the gas.

TEN-ACRE SPACING FOR THE BEN BOLT FIELD, Jim Wells County, was provided in an order issued by the commission. Wells will be spaced 330 ft. from lease lines and 660 ft. apart. The regulation calls for 1,000 ft. of surface casing to be set with 300 sacks of cement and an oil string set with a similar amount.

STATE CAPITALS

ARKANSAS

ARKANSAS OIL AND GAS COMMISSION held a special meeting on June 22 for the purpose of discussing ratable taking in the Magnolia field in Columbia County. Later, the commission, in an order signed by A. M. Crowell, director of the commission, set forth the following rules:

"Effective July 1, and until further notice, the basic allowable production as between wells and leases in the Magnolia field shall be as set out in Order 20-39, except that these allowables be reduced each and every one by 33⅓ per cent, or shall be two-thirds of the present daily allocation.

"All new wells completed and brought into production after June 1, 1939, shall have their allowable production computed in the following manner: The acreage of the well shall be multiplied by the bottom-hole pressure of that well and this sum multiplied by 0.2149529 bbl. The indicated allowable shall then be reduced by 33⅓ per cent, which shall constitute the amount of oil that particular well may legally produce in any one day of 24 hours.

"It is further ordered that every person now or hereafter engaged in the business of purchasing and selling crude oil in the Magnolia field shall purchase the allowed production of the wells and leases in the Magnolia field without discrimination in favor of one producer against another."

CALIFORNIA

SPIKING RUMORS THAT CALIFORNIA operators would begin immediate wide-open production as a result of the passage of the Atkinson bill during the intervening 90-day period between the time of its signature and operative date, the Central Committee of California Oil Producers, official curtailment group, through its chairman Lawrence Vander Leck addressed a letter to all producers calling attention to the fact that crude oil curtailment would be continued until the present plan is supplanted by some other means of proration. The letter to operators is as follows:

"At a meeting of the Central Committee held on June 22, 1939, the chairman was directed to communicate to all operators the following facts:

"There has passed the Legislature of the State of California an oil control bill known as the Atkinson bill, which when signed by the governor will become effective 90 days after the adjournment of the legislature. However, the bill may be held up by a referendum which will prevent its going into effect until after voted on by the people. Unless the governor calls a special election this will not be until the next general election, which is November 1940. Hence it is apparent that there will be need of the Central Committee continuing to function as it has in the past, and that such efforts must continue for some time to come in the future.

"Rumors to the effect that oil production is going wide open and the Central Committee is going out of existence are unfounded and not based on facts. Operators who are curtailing have given assurance to the Central Committee that they will continue in their cooperative efforts. Production from all fields in the state for the first 20 days of June averaged 609,558 bbl. daily, or nearly 12,000 bbl. daily below the corresponding period last month. It is the sense of the committee that at this time its existence and continued efforts toward curtailment are extremely important and all operators are urged and asked to continue their support and adherence to schedules sent out by the Central Committee.

"It is the purpose and intent of the Central Committee, as expressed in the unanimous vote directing this letter, that it will continue to function until such time as it is completely superseded by statutory regulations as may arise out of the Atkinson bill.

"The Central Committee has at all times been and still is, entirely neutral in any effort to secure state regulation of production. It will continue this policy. However, it will not let up in its efforts to secure the maximum of voluntary curtailment, just as it has in the past and it asks the continued support of the operators to obtain this result, which it believes will be to the benefit of every operator in the state."

The OIL AND GAS JOURNAL

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Plain Words

In the light of current conditions in the oil industry, some statements made last week by E. T. Weir, chairman of the National Steel Co., and new president of the American Iron and Steel Institute, are interesting and particularly pertinent. He says in part:

"Steel makers have no one to blame but themselves for the economic ills of the industry. Responsibility for poor conditions cannot be laid to high wages, nor to pressure for lower prices by consumers.

"Steel makers should remember that they are in business to make a profit, and not until then will their financial statements be written in black instead of red.

"Fundamentally, there is nothing wrong with our business. I maintain that if the management of any company is conducted in a sound way it will make profits, even at low levels of operation. And there is nothing mysterious about 'sound way.' The only way to make a profit is to sell at a price higher than cost."

Condemning the practice of "throwing away profits by ill-advised price-cutting and concessions to buyers," Mr. Weir continues:

"Prices never should have been reduced to the point where profits were forgotten. The steel business is like any other; there must be a selling price that covers production costs and expenses and profits.

"The steel industry," he says, "is in better position to advance than at any previous time since capacity has been boosted, and plants are in better physical shape than they have been for a long time."

These remarks have obvious application to the situation surrounding products prices in the oil industry.

With consumption never so great; with plants and facilities never in better condition throughout the country, the oil industry suffers needlessly from a self-imposed price depression.

In his analysis of the steel industry's ailments, Mr. Weir goes on:

"It is principally management that is responsible for our plight. Not politics. Not economics. Not high labor costs. As I've said before, I'm against reducing wages."

Certainly, his business formula is based on common sense. As Mr. Weir asks:

"What can executives expect when salesmen are sent out to get business at any cost, even at the cost of profits?"

In this connection the position of stockholders of the oil industry are naturally to be considered. In 1938, a year which witnessed the all-time record in consumption of the principal oil products, the stockholders of the 32 largest oil companies in the country received in cash dividends only $219,107,690.

This is precisely 2.60 per cent return upon the total assets of these companies representing approximately 65 per cent of the oil business in the country, practically the same as the present low yield on government bonds.

This year, so far, shows substantially lower earnings than 1938.

Mr. Weir's criticism is directed to the steel industry which at this time is operating at only 55 per cent of its capacity. Yet in the oil business we have the same depressing price conditions despite a demand for most products exceeding that of any previous year.

The plight of the oil industry parallels the plight of the steel industry. Prices should never have been reduced to the point where profits were forgotten. All the familiar explanations dovetail into one fact, that the primary responsibility for the condition of the oil business today rests squarely upon management.

Gain of Six Per Cent in July Domestic Gasoline Estimate

The daily average supply of domestic crude oil estimated by the Bureau of Mines to meet the market demand in July is 3,513,200 bbl. This is 22,200 bbl. (1 per cent) more than the estimate for June and 2 per cent more than the actual demand in July 1938. The estimated runs to stills of 3,345,500 bbl. daily is 124,300 bbl. higher than the actual daily average for July 1938, but the estimated foreign runs are more and exports are materially less.

Daily average crude-oil production and runs to stills during the 5 weeks April 29 to June 3 were 3,540,000 and 3,379,000 bbl., respectively. During this period total crude-oil stocks declined 1,375,000 bbl., while stocks of foreign crude increased 92,000 bbl., indicating a total decline of 1,467,000 bbl., equivalent to 42,000 bbl. daily, in domestic stocks. The addition of this to the production gives 3,582,000 bbl. as the apparent daily average demand for the period, compared with the bureau's forecast of 3,425,200 bbl. for May. Much of this apparent excess crude demand in May represents higher runs to stills than were estimated.

All figures thus far available for the second quarter indicate that runs to stills have been at such a high level that adequate progress in the seasonal reduction of gasoline stocks has been retarded.

TABLE 1—ESTIMATED DAILY AVERAGE CRUDE-OIL DEMAND BY STATES (BARRELS)

(As no changes in crude-oil stocks are involved in these estimates, they represent demand rather than production)

State	Forecast July 1939	Forecast June 1939	Actual demand July 1938
Texas	1,426,500	1,427,300	1,347,000
California	595,200	594,600	655,000
Oklahoma	456,100	450,300	555,000
Louisiana	264,500	265,000	252,000
Illinois	187,400	174,300	44,000
Kansas	160,300	152,400	164,000
New Mexico	116,100	117,000	121,000
Wyoming	73,200	73,300	82,000
Arkansas	53,900	54,700	68,000
Michigan	53,200	53,400	57,000
Pennsylvania	50,800	50,200	42,000
Montana	16,100	17,300	11,000
Kentucky	15,900	17,000	17,000
New York	15,400	14,900	10,000
Ohio	10,500	10,900	7,000
West Virginia	10,700	10,700	10,000
Colorado	4,800	5,000	4,000
Indiana	2,600	2,700	3,000
Total	3,513,200	3,491,000	3,449,000

Motor fuel.—The estimated domestic demand for motor fuel is 52,600,000 bbl. Although this is 11 per cent greater than the abnormally low demand of July 1938, it does not amount to more than 6 per cent increase over the estimated normal demand for that month.

Exports.—Motor-fuel exports have been estimated at 4,200,000 bbl., or 100,000 bbl. less than for June.

Stocks.—Stocks of finished and unfinished gasoline on April 30 were 87,531,000 bbl. According to statistics of the American Petroleum Institute, they declined about 2,850,000 bbl. during May, which would bring them to approximately 84,700,000 bbl. as of May 31. The bureau estimates a decrease of 6,000,000 bbl. in July.

Gasoline production.—Benzol and direct sales of natural gasoline have been estimated as 1,000,000 bbl., making refinery production 49,800,000 bbl. This is distributed among the various districts as follows (thousands of barrels): East Coast, 6,540; Appalachian, 1,840; Indiana-Illinois, 8,880; Oklahoma, 2,950; Kansas-Missouri, 2,460; Texas Inland, 3,620; Texas Gulf Coast, 13,260; Louisiana Gulf Coast, 1,520; Inland Louisiana-Arkansas, 960; Rocky Mountain, 1,260; California, 6,510.

Runs to stills.—Natural-gasoline to be blended at the refineries in July is estimated as 6.5 per cent of the total gasoline production, or 3,240,000 bbl. The yield of straightrun and cracked gasoline is estimated as 44.9 per cent. The application of this yield to the production of 46,560,000 bbl. gives crude runs of 103,710,000 bbl., or 3,345,500 bbl. daily. The estimate for foreign crude runs has been raised to 3,000,000 bbl., 600,000 bbl. higher than the June estimate.

Exports, fuel, and losses.—Exports of crude oil are estimated as 6,400,000 bbl., or 500,000 bbl. more than the June estimate but less than the July 1938 actual by 850,000 bbl. The estimate for fuel and losses is 1,800,000 bbl.

Total demand.—The total demand for domestic crude oil in July 1939, as indicated by the estimates above, is 108,910,000 bbl., or 3,513,200 bbl. daily.

Crude-oil demand by states.—The breakdown of the total estimated daily demand for domestic crude oil of 3,513,200 bbl. give the following crude requirements by states of origin. As these requirements may be supplied either from stocks or from new production, contemplated withdrawals from crude-oil stocks must be deducted from the bureau's estimate of demand to determine the amount of new crude required. These estimates are not recommendations for production but represent the projection of actual market trends by states.

Progress of Legislation At National Capital

WASHINGTON, D. C.—The bill to extend the Connally hot oil law for 3 years having passed the House by a vote of 171 to 99, it was anticipated the Senate would accept the 3-year limitation rather than insist on its measure to make the law permanent, since the law is due to expire June 30, and any prolonged controversy in conference in an attempt to agree on a longer extension might jeopardize continuation of the law's enforcement.

The new revenue bill, including a provision continuing the gasoline and other excise taxes for another 2 years was sent to Congress and to the president in record time. Senator Gurney of South Dakota made an unsuccessful attempt to exempt from the gasoline tax motor fuel blended with at least 10 per cent of alcohol produced from domestic crops. Chairman Pat Harrison of the finance committee opposed the amendment on the ground it requires careful study, the Departments of Agriculture and the Treasury are opposed to the proposal, and a special subcommittee of the finance committee which held hearings on it has not yet reported. The Gurney amendment was defeated, 28 to 38.

A compromise between the House and the Senate over the appropriations for antitrust enforcement resulted in removing some of the restrictions the Senate had inserted. The House agreed to the Senate provision that none of the fund shall be expended for permanent regional offices of the Antitrust Division although the compromise permits establishment of temporary offices. The Senate withdrew its provision that antitrust cases may be brought only in cooperation with federal district attorneys.

The house accepted the Senate amendment to the Department of Commerce appropriation bill authorizing the secretary to employ a staff of experts and business specialists, but reduced the appropriation for this purpose to $100,000.

Kansas Commission Hears Panhandle Eastern Side

No producing company could obtain and supply its market demand of gas from the Hugoton field of southwestern Kansas without overproducing under the gas proration formula of the Kansas Corporation Commission was the conclusion reached by C. H. Hinton, Kansas City, Mo., proration engineer, with Panhandle Eastern Pipe Line Co., at the rehearing on proration of the Hugoton field.

He said the average well-spacing for the company's wells was 542 acres, the majority being plotted on a 640-acre spacing pattern. Panhandle owned 125 wells connected to the trunk line while it purchased gas under contract from 13 wells belonging to the system of the Argus Natural Gas, Inc.

Mr. Hinton said it would require 90 years for Panhandle to drain its supply from the Hugoton field at the present rate of withdrawal, including reserves of contracted wells, and undeveloped acreage held by delayed rentals, based on a weighted average of 8,500,000 cu. ft. per acre. Limited to developed acreage, Mr. Hinton said it would require 49 years to drain its properties at the present withdrawal rate, based on an ultimate recovery factor of 10,000,000 cu. ft. of gas per acre.

Panhandle had withdrawn slightly more than 7 per cent of its total reserves, cited as 7.3942 per cent, based on a total withdrawal of 47,149,989,000 cu. ft. up to May 22, 1939, compared with a total developed reserve of 637,659,500,000 cu. ft.

Schleicher County Discovery Well Given Potential Test

SAN ANGELO, Tex., June 26.—Schleicher County's discovery oil producer, Lone Star Gasoline Co. No. 1 Humble-Page, 11 miles southeast of Eldorado, flowed 158 bbl. of 42.2 corrected gravity crude on a 24-hour commission gage. Average choke on 2-inch tubing was 12/64 in. Gas-oil ratio was 700 to 1.

Harold B. Opp No. 1 J. T. Jackson, indicated opener of the county's second pool, 4 miles northwest of Eldorado, recovered 28 bbl. of 34-gravity oil, 21 hours' accumulation, in swabbing through 6⅝-in. casing. Two-inch tubing will be run probably in midweek, and further testing likely will be followed by acidizing.

Long Beach Drilling Ban Taken Into Court

LOS ANGELES, Calif.—A petition for an injunction to restrain the enforcement of ordinances in the city of Long Beach restricting the drilling for oil was filed in the Superior Court by Continental Corp. and the Los Angeles County Flood Control District. The complaint attacks the validity of 28 ordinances adopted since March 9, 1927. If the plaintiffs are successful it will throw the entire city open to townlot oil drilling, it was asserted.

Texas Extends Sovereignty 27 Miles Out in Gulf

AUSTIN, Tex.—One of the last bills passed by the legislature was one extending the sovereignty of the state 27 miles into the Gulf of Mexico to protect potential oil deposits for the school fund. Attempts have been made to get Congress to claim all submerged lands for the Navy, but have failed.

Louisiana some time ago asserted its jurisdiction to the 27-mile limit and California is doing likewise.

Oil Shale Beds Discovered In San Saba County

AUSTIN, Tex.—Oil shale beds of great size and richness have been discovered in San Saba County about 100 miles northwest of here, it is stated in a report by Dr. F. B. Plummer, geologist of the Bureau of Economic Geology of the University of Texas. Some samples of the shale have distilled as high as 80 gal. to the ton, and the average production has been between 20 and 30 gal., Dr. Plummer said.

Missouri Legislature Vetoes Gasoline Tax Raise

JEFFERSON CITY, Mo.—The senate of the Missouri Legislature voted 25 to 8 against a proposal to increase the state's gasoline tax from 2 to 3 cents a gallon and cut motor-car registration fees by half.

Mid-Continent Strike

All evidence has been submitted in Tulsa District Court in the trial of Jack N. Hays, president of the Tulsa local of Oil Workers International Union, on charges of directing a riot at the beginning of the strike at the West Tulsa refinery of Mid-Continent Petroleum Corp. The N.L.R.B. hearing at Tulsa has been adjourned to July 5.

Divorcement of Marketing Is Vigorously Protested

By HENRY D. RALPH

WASHINGTON, D. C., June 26.—Forceful and telling arguments against the Harrington bill, H.B. 2318, to divorce marketing from other branches of the petroleum industry, were given to a subcommittee of the House committee on the judiciary at two hearings by spokesmen for major oil companies, small integrated concerns, and independent jobbers, retailers, refiners, and producers.

The hearings are now completed except that an attorney for the Independent Oil Marketers Association will be given a brief opportunity for rebuttal June 28. As a result of the material presented, it is not expected such legislation will reach the House during this Congress.

An explanatory treatise on the economics of the petroleum industry was read to the committee by William S. Farish, president of Standard Oil Co. of New Jersey, chiefly pointing out that integration leads to efficiency and lower prices, that there is competition in the industry, and that the major companies are not deliberately losing money in their marketing operations for sinister purposes or to drive jobbers out of business. Even disregarding the antitrust laws and public opinion, Mr. Farish said economic conditions would make it impossible for the major companies to obtain a monopoly.

Farish Defends Industry

Declaring that competition among major companies is strenuous, Mr. Farish said that in the last decade a large number of new companies have cut large slices out of the older companies' territories and that a decline of about 50 per cent in the price of gasoline during the last 20 years is due to competition and has resulted in better gasoline to the consumer. Referring to brand names, he said they do mean something; that in addition to the physical characteristics of the gasoline, brand names stand for services which include constant effort to provide the best fuel for consumers. He defended advertising as not being an economic waste but as stimulating consumer demand for proper types of gasoline and stimulating the sale of other products at filling stations, and he explained the efforts of major companies to adjust the specifications of their gasoline to various seasons, geographical areas, and types of automobiles. Exchanges of gasoline are made between major companies to avoid unnecessary duplication of services and transportation costs, and mean the seller takes commercial responsibility for the performance of the gasoline, Mr. Farish insisted, pointing out that in few branches of industry is the seller required to be the sole manufacturer of his product.

Jobbers who are most strenuously advocating the Harrington bill are those who have only one appeal to the public, that of price, Mr. Farish declared, but the public, as a rule, prefers branded gasoline and the services that go with them; but when branded gasoline prices are lowered, the unbranded products must be lowered even more to maintain their only appeal to the public. His own company sells as much gasoline to wholesalers as they are able to pay for; and instead of trying to eliminate them, he considers jobbers preferred customers if they can operate efficiently.

The New Jersey company does not conduct its marketing operations at a loss, Mr. Farish said, explaining that this charge grows out of instances in which there is a lag in the adjustment of retail prices to other costs. Integration is natural and logical, he said, since both marketing and refining need large volumes of flow and the assurance of an efficiency which comes from this form of operation. Marketing and refining are too closely interwoven to be separated without serious damage to the industry; competition between the integrated companies and the independent marketers is not unfair but is the natural result of industrial development. Integration gives higher quality at lower prices and is responsible for technical improvements, steady employment and good wages.

Mr. Farish said the result of this legislation would be a complete disruption of business, common stock would become more speculative, and business confidence would receive a severe blow; it would hurt the jobbers, and it would also hurt the retail dealers who would suffer from the resulting increase in prices. A great many men would be unemployed and there would be a period of uncertainty after passage of the bill before these men were absorbed in the industry again.

A detailed defense of the efficiency of the petroleum industry as a whole was presented by Mr. Farish, who said the social efficiency of any industry should be judged by the quality of its products, the way in which products are made available to consumers, prices, and employment records. Applying these standards to the oil industry he found the industry rated high on all counts, giving the committee detailed statements of advances in the quality of petroleum products, wide distribution of the industry's products and its services to consumers, decline in prices during recent years and comparison between gasoline prices and other consumer goods, and wages, hours, and continuity of employment in the oil industry compared with industries generally.

Revolutionary Says Brown

John A. Brown, president of Socony-Vacuum Oil Co., Inc., characterized the bill as "a most startling revolutionary idea in the business thinking of our country" and declared it tantamount to prohibiting the farmer from selling his vegetables in front of his house. "If the proponents of this bill have their way," Mr. Brown declared, "the American petroleum manufacturer will be the real isolationist of the world. He will sit in his refinery yard forbidden to do anything about refining his raw material or bringing it to his plant. He will be unable to have terminals or warehouses or depots of any kind for the storage and convenient delivery of his products. He cannot even send a boy across the street with a can of oil. He will not be able to continue the efficient and helpful sales and delivery service which exists today. The discontinuance of this service would be a real loss to the American people. By some unknown means of persuasion he will have to induce buyers to come to the doorstep of his plant and take title to the goods."

One of Mr. Brown's principal arguments was that the big companies do not deal in gasoline alone, but in many other commodities, such as heating and lubricating oil. In the case of heating oil, the companies store the product and deliver it directly to consumers, keeping records and making collections, and the bill would require that these functions be turned over to a third party who would not have means to conduct the business so efficiently. The companies maintain laboratories and make scientific studies of lubricating questions, establishing direct contact with customers to give them scientific services, and the jobber could not and probably would not perform the services so the customers would lose.

Effect of Bill

Mr. Brown described the four main branches of the industry and the effect on each should the Harrington bill be enacted. Speaking of production, he explained that the large companies are able to go to great expense in exploration and drilling, study technical improvements and conservation methods and absorb the cost of dry holes. Jobbers would not have the facilities to do this, nor would they be permitted to under the bill. Mr. Brown said pipe lines are plant facilities; their rates are under the control of the Interstate Commerce Commission and any complaints can be remedied under existing law. In the refining business, Mr. Brown said, there is competition, but this law would freeze it; there are hundreds of refineries and the largest does not account for 12½ per cent of the business; it is a large-capital enterprise and must remain so to keep pace with technical development. In regard to marketing, Mr. Brown stated that petroleum jobbers have increased in number by some 528 per cent in the last 20 years and that Socony-Vacuum's own jobbers increased by some 200 per cent since 1931, so that there is a real growth in this branch of the industry rather than a process of squeezing out.

Integration of an oil company increases its competitive position, Mr. Brown stated, giving as an example his concern which started as a marketing organization with small refining capacity but was forced by competition to become integrated. Turning to complaints that major companies trade gasoline, Mr. Brown said such exchanges are made only when the gasoline meets the specifications of the brand under which it is to be sold and for the purpose of avoiding wasteful cross-hauls, and he declared that this practice does not mislead the public nor suppress competition. In answer to questions, he said that the oil companies do not make exorbitant profits and do not ordinarily take a loss on their marketing to be made up by profits of other branches.

A jobber viewpoint different from that presented to the committee at earlier hearings was given

by Eric V. Weber, president of Eureka Oil Co. of Cincinnati, Ohio, and also president of the Ohio Petroleum Marketers Association. In going on record against this bill, he said, his association is not disposed to question the sincerity of its advocates but did question the thoroughness with which the proposal had been studied. It would result in drawing a ring around every jobber and prevent him from expanding through initiative and prudent management into any field except marketing. This bill would create a large number of new agencies which would add to the cost and would not have the capital or facilities for carrying on petroleum marketing as efficiently as at present. The bill would increase unemployment and increase consumer prices as well as disrupting the industry without commensurate benefits to the public. Mr. Weber detailed the competitive forces in fixing retail gasoline prices.

Herbert V. Fuller, attorney for the Ohio Petroleum Marketers Association, explained there are various types of distributors grouped as jobbers, and suggested the next logical step would be to prevent wholesalers from engaging in retailing.

Pew Assails Bill

J. Howard Pew, president of Sun Oil Co., defended the necessity of integration. The bill, he said, aims to improve conditions of jobbers by giving them a monopoly on petroleum marketing, although the major companies have shown they can do this more efficiently. The only people who would profit by this law would be the middlemen and the result would be they would have the power to fix unfair prices and engage in monopolistic practices. He stressed the scientific and technological advances made by the major companies in all branches and the benefits to consumers brought about by integrated companies in providing their own methods of transportation at lower costs than rail shipments. These facilities, he declared, are as intimately a part of the industry as an assembly line is in an automobile factory. He could not recall an instance in which so much legislative dynamite, industrial disaster, and economic perversity have been packed into so few words of a legislative proposal, Mr. Pew declared as he told the committee:

"This bill comes to your committee as a means to help the oil jobber; but it would in fact deprive the refining company of the right to use any transportation whatever, or make any deliveries of its products. That means that the refining company would have to get rid of not only its gasoline pipe lines but all other transportation facilities used in connection with marketing.

"Under this bill petroleum products must be sold at the refinery, but the refinery is prohibited from delivering them, and a marketer is prohibited from transporting them, even after he establishes his ownership. Thus the refineries would have to dispose of all their marketing facilities they now possess, which means not only gasoline pipe lines but railroad tankcars, tank ships and barges, tank trucks and storage plants. There are 150,000 tankcars. Some companies, like ours, own these tankcars and would have to get rid of them; the industry would also have to get rid of the 100,000 tank trucks it uses. But that is not all. The companies would have to divest themselves of a large part of their fleet of ocean-going tankships, because these are used for transporting refined products as well as crude oil. Altogether, these marketing facilities—transportation plus terminal properties, bulk stations, etc.—involve an investment of nearly 2 billion dollars. Somebody would have to take all that over; but this bill's mandate takes no account of that.

"The oil industry deals in enormous tonnage of very cheap materials which must be moved long distances. It is calculated that, despite the very low transportation costs, still one-third of the cost of gasoline when it goes into the consumer's car represents transportation. A chief reason why petroleum products are cheap is because the industry has built up its own unique transportation system—by far the cheapest transportation in the world. . . . The companies that own these vessels would have to get rid of all of them except such as they are certain not to use at any time for transporting refined products. Refining companies which operate their refineries along the Gulf Coast and ship the products north by sea would have to dispose of their entire fleets."

W. T. Holliday, president of Standard Oil Co. of Ohio, said his company has always made a profit on marketing operations; it is not an integrated company since it has only a negligible crude production and, itself, transports only a part of the oil it refines. Declaring that refineries generally have not been making profits during recent years, Mr. Holliday opposed the bill on the ground it would destroy the unintegrated or so-called independent refinery, since it would prohibit a refiner doing anything beyond his refinery gates in the distribution of his products.

The opposition of retailers to the bill was expressed by Wilmer R. Schuh, president of the National Association of Petroleum Retailers, who admitted there are evils in the marketing system and that there are many difficulties facing independent retailers, but he declared the Harrington bill is not the solution to these problems. He asked that if the bill is passed it be amended to prohibit wholesalers from also engaging in retailing of petroleum products. Mr. Schuh said:

"On the surface, to the small service station owner this bill seems to be a measure having some merit, and if it were possible to divorce the refiners, transporters, and producers from marketing, and still retain our present benefits, we undoubtedly would go on record as favoring the measure. However, that's like having your cake and eating it too. There are certain benefits that accrue to us under the present system of petroleum distribution. They can be hastily outlined: A source of supply of consistent quality; usually a well-rounded advertising program; a certain degree of stability; and vital protection to those of us handling branded products. In addition the consumer derives a great deal of benefit in the form of lower prices under the present system.

Distress Gasoline

"Today distress gasoline has so demoralized the tankcar market that the published prices are little more than a point from which to start bargaining. Distress gasoline has the same effect on the service stations that distress farm products have on the farmer. In the long run, the only ones who benefit from distress merchandise are the price-cutters—the chiselers about whom President Roosevelt spoke.

"The enactment of H.B. 2318 will demoralize the markets for premium oils. It will bring on a flood of truck transports to further crowd the highways with vehicles hauling an exceedingly dangerous product at its best. It would take away from the railroads some of the much-needed revenue they now receive for hauling petroleum products. It would take away from small integrated refiners, transportation facilities which are essential to their profitable operation.

"No one can come before this committee and honestly state that a monopoly exists in the marketing branch. The small refiners and unbranded marketers are consistently gaining volume. A record of almost any trading area will divulge many marketers, both wholesalers and retailers, who have entered the business within the last 6 or 8 years, and a checkup on their income would show they are doing exceedingly well; in fact, too well to suit many branded dealers."

The opposition of a small integrated company was presented to the committee by Paul G. Blazer, president of the Ashland Oil & Refining Co., Ashland, Ky. Declaring that independent marketers handle some 80 per cent of his company's production of gasoline, Mr. Blazer said it is to his advantage to have independent jobbers prosper and expand, but his company could not continue to furnish his customers with good gasoline at prices which would enable them to compete successfully with the large oil companies if this bill were enacted into law. His explanation was that transportation costs constitute the most important factor in the wholesale price of gasoline and the Harrington bill would disrupt present methods of transportation since the industry could not depend upon a multitude of independent jobbers to maintain pipe lines and barge distribution facilities which are much cheaper than railroad transportation. As the bill is written there is a no-man's land in which no one could step, Mr. Blazer declared, since neither the marketer nor the producer could transport oil for resale, and so a whole new group would have to come into the industry interested in buying cheap and selling high. The middleman would thus be in a position to squeeze both the producer and the retailer. The result of this legislation would be an increase in monopoly although the combinations would be horizontal instead of vertical.

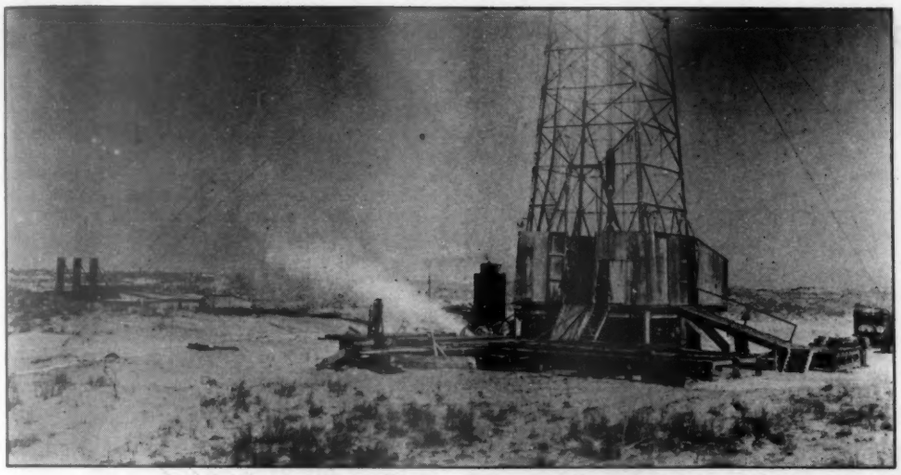
California View

A description of the complexities of the oil industry and of the chaos which might result if the Harrington bill were enacted was given to the committee by R. L. Minckler, assistant to the president of General Petroleum Corp. of California and representing the California Oil and Gas Association. Explaining that the type of jobber for whom this legislation is written is practically nonexistent on the Pacific Coast and that marketing conditions there are somewhat different from those east of the Rocky Mountains, Mr. Minckler declared that, because of geographical conditions, small companies and large companies use the integrated method under which oil moves constantly and steadily through a closed system of lines without interruption and there are no barriers separating production, transportation, refining and marketing from each other but these functions are inseparably merged.

"This legislation proposes to wreck the smooth-running single operations by erecting a series of barriers beyond which the operator cannot go," he declared. "Our physical plant and equipment is designed for efficiency, not to provide jobs for middlemen. This proposed legislation will change all this. If the refining company can sell only at the refineries, the marketing company cannot engage in transportation, so neither refiner nor marketer can get the oil from the refinery to the point where the marketing company can sell it. A third, transportation, company must be injected. Obviously, these three companies, each forbidden to control or influence the others, cannot use the same tanks, the same pumps, the same employes for their separate operations."

Russell B. Brown, general counsel of the Independent Petroleum Association of America, opposed the Harrington bill on behalf of smaller petroleum producers. He contended that when middlemen exact unjustifiable privileges from the industry and impose unnecessary costs upon the consumer or are willing to destroy an industry so they may personally profit by salvaging the wreckage, such middlemen do not justify the toll which they exact from the public.

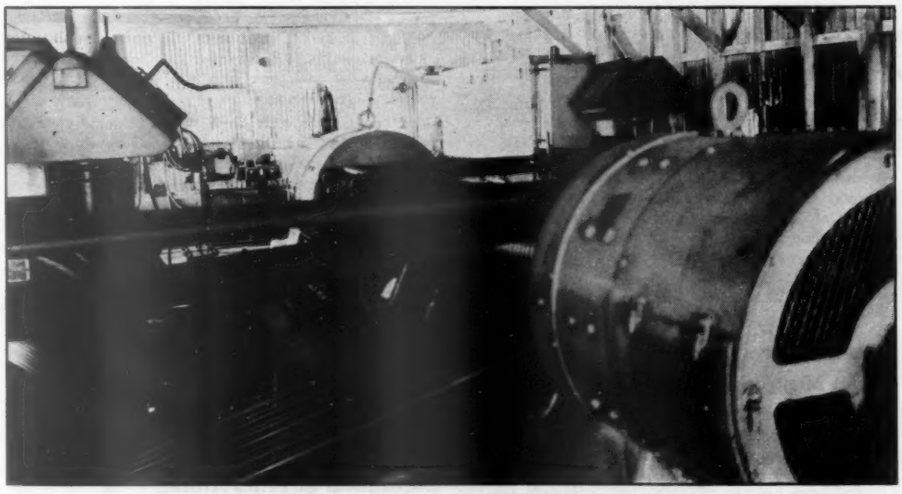
J. C. Hunter, president of the Mid-Continent Oil and Gas Association, opposed the bill as inefficient and wasteful.



Left: Heavy-duty rotary steam drilling in the Ordovician producing portion of the Sand Hills field, Crane County, West Texas. Below: Diesel engines and electric generators of a mechanical electrical rotary drilling in the Sand Hills field

Drilling Shows Lively Spurt in West Texas Fields

By D. H. STORMONT



FORT WORTH, Tex., June 26.—Activity in West Texas, after suffering a decline during the latter half of last year and the first few months of this year, recently has shown an upward trend and drilling is now at the highest level since last August. At the middle of this month 285 rigs were drilling and 72 active locations were staked. In the previous month 178 completions were registered, the highest monthly total since July of the preceding year. Although a continued upturn in operations is expected for the next several months, no great increase is foreseen at this time.

Most activity in the coming months will probably be in the more recently discovered areas of the north Permian basin, in some of the older fields which recently had substantial extension to their producing limits, and in Pecos and neighboring counties where the search for Ordovician production is going on with renewed vigor following the opening of a new Ellenburger field late in May. The entire area is well fortified with proven locations and favorable wildcat prospects that would permit major development programs if demand for West Texas crude necessitated such action. As it is, activity during recent months was reduced to as near a minimum as drilling requirements would permit, and the upturn in activity merely establishes drilling somewhere near normal. While the number of operations and monthly completions are still below those of this time last year, the remaining months of this year should see a reversal in this comparison due to the continued decline in activity throughout 1938.

Search for deep production in Ordovician pays, which has been going on spasmodically for the past 10 years, late in May resulted in the opening of an Ellenburger pool in Pecos County. This new field, first commercial Ordovician production for the county and third for entire West Texas, opened the entire northern portion of Pecos and the southern areas of Ward and Crane counties for exploration of the shallowest Ordovician production yet found in West Texas. Due to the pay being found at around 4,600 ft. as compared with depths of 5,000 and 5,500 ft. in the north basin, and that the oil is sweet rather than sour, it is expected that this area will receive considerable attention in coming months. Another factor tending to make this drilling attractive is the fact there is a possibility of three different pays; the shallow Yates pay, the intermediate Colby lime and the deep Ordovician pay.

Following the opening of Ellenburger production in West Texas in 1928 (the Big Lake field of Regan County at a depth of 8,500 ft.), prospecting for other fields was started. A number of deep tests were drilled in various parts of the district during the next 9 years, but all failed to find oil in commercial quantities from the Ellenburger. Gulf Oil Corp., after drilling a 12,786-ft. test in the McElroy field of western Upton County and two other tests in the Sand Hills field of western Crane County early in 1937, opened a second Ellenburger pool. The company's No. 1 and No. 2 Waddell, in the Sand Hills field, both found sulfur water in the Ellenburger, although they were completed as small producers in the overlying Simpson at around 6,000 ft. Its No. 4 Waddell ran some 310 ft. higher on the top of the Ellenburger than in Nos. 1 and 2, with the Simpson running some 600 ft. thinner, and oil was found in place of the sulfur water to open the second Ellenburger pay.

Numerous tests have been drilled in the past 2 years, but no other commercial Ordovician production was discovered until a deeper pay was opened last month in the 1,400-ft. Masterson pool of Pecos County. The discovery well, Anderson-Prichard Oil Co. and Monte Warner No. 1 Masterson, topped the Ellenburger at —2,129 ft. and was completed at a total depth of 4,595 ft. (45 ft. in the Ellenburger) for an official potential of 184 bbl. daily, naturally, of 43-gravity oil. Following a Railroad Commission hearing the name "Apco" was adopted and temporary field rules promulgated with a well-spacing of 40 acres. Most of the surrounding territory is held by major companies so that, despite the comparative shallow depth of the Ordovician pay (as compared with the 8,300-9,000-ft. Big Lake field and 6,000-ft. Sand Hills pool), a rather slow and unspectacular development program is expected.

Considerable core drilling has been done in the area around the Fort Stockton high, on which

(Continued on Page 98)

Illinois Basin Discovery Boon to "Mike and Ike" Railroad

Most recent railroad to benefit from new oil operations was formerly a humble member of the Missouri Pacific system, the Missouri & Illinois Railroad, locally known as the "Mike and Ike." It runs from Salem, Ill., to Ste. Genevieve, Mo., about 50 miles south of St. Louis; total trackage is 133 miles.

The road struggled with large volumes of red ink for the many years past. Occasional shipments of coal, sand, gravel and agricultural products were carried over its weed-covered tracks. The deficit for the first four months of 1938 was $32,096.

Discovery of the Salem field in Marion County, Illinois, altered the "Mike and Ike" operating and fiscal picture. Loading racks sprang up along its tracks at Selmonville, Robinett and other points in the Salem field. The old engine labored delivering empty tankcars and pulling out loaded ones. Over 5,000 cars of crude and 2,000 cars of refined products have been carried over the line since the discovery of the field. Part of these shipments were long hauls while others were to Centralia for shipment on other routes. In the first 4 months of 1939, the road showed a net income of $104,698.

The "Mike and Ike" has also leased its right of way for drilling. At one time the train crews could have leaped to derrick floors from engine or cars. There are now 20 wells belonging to the railroad in the Salem field and for a time at least the old "Mike and Ike" is definitely in the clover.

"Mike and Ike" (Missouri & Illinois) locomotive backing a train of tankcars into Selmonville siding. Pumping well along right of way, flowing well at right of photo, and the 2-in. pipe shown in the center was used for flowing crude into an earthen pit

THE MARKETS*

CRUDE OIL: *No changes in posted prices. Sales under posted schedules continue to be disturbing factor in general crude market. Spot tanker sales for coastwise and export movement over past week reflect weakness.*

REFINERY: *Heaviest gasoline shipments of year serve to maintain tankcar prices, despite failure to maintain recent tank-wagon advances in several marketing areas. No special strength reported in any of the other refinery products. Natural gasoline and wax firm.*

TANK-WAGON AND POSTED DEALER: *Action of Sinclair Refining Co. in advancing gasoline tank-wagon price a half-cent in 42 states now 65 per cent effective. Failure of companies to meet advance in certain areas forced return to former price levels. Scattered advances have been made effective, usually applying to points which had been subnormal.*

FINANCIAL: *Several small reductions in inactive market brought lower average levels in oil stocks. Average of 30 representative stocks for week ending June 24: High, 25.43; low, 24.76; close, 24.92. Week ending June 17: High, 25.72; low, 24.62; close, 25.53.*

Obituaries

LEROY ADAMS, 56, president of Galvez Oil Co. and a former Tulsan, died in Abilene, Tex., July 26. He entered the oil business as a young man, working for National Refining Co., in Cleveland, Ohio. He had conducted operations in Kentucky, Kansas, East Texas and Mexico. He was also active in Canadian developments for several years.

Domestic Airlines to Consume 50,000,000 Gal. in 1939

Domestic airlines of the United States operating on a regular schedule will consume approximately 50,000,000 gal. of gasoline and approximately 870,000 gal. of oil, according to estimate made by United Air Lines this year.

Armstrong Says Oklahoma Output Must Be Cut

William J. Armstrong, conservation officer of the Oklahoma Corporation Commission, said Tuesday:

"After canvassing the purchasers, we find it's going to be necessary to reduce the allowable in Oklahoma by at least 50,000 bbl. from the present production in the next 60 days. This production must then be reduced 25,000 bbl. in July, and an additional 25,000 bbl. in August, which will bring the production to 400,000 bbl. beginning August 1, at which point we wish to hold it for the balance of the year."

Interstate Commission Report On Pipe-Line Operations

While the transportation of crude oil by pipe lines decreased 10 per cent in the United States in 1938 as compared with the previous year, gasoline moved by pipe line increased 5.5 per cent to a new annual record of 65,116,820 bbls. There are seven major gasoline pipeline systems at present totaling about 5,000 miles in combined length. This contrasts with approximately 52,000 miles of trunk pipe lines for the transportation of crude petroleum, which are fed by gathering lines tapping the various oil fields.

Some of the major companies are increasing their gasoline pipe-line facilities, either by construction of new lines and extensions of existing systems or by converting lines formerly used for crude oil over to the movement of motor fuel.

Statistics just released by the Interstate Commerce Commission show that of the seven leading gasoline pipe-line systems, all but two showed larger runs in 1938 than in 1937. There are also a number of intrastate lines which were built in 1938, statistics for which are not available, but it is certain their operations would swell the total of gasoline pipe-line runs considerably.

Great Lakes Pipe Line Co. ran 13,372,408 bbl. of gasoline in 1938, compared with 13,330,400 bbl. in 1937. Keystone Pipe Line Co., owned by Atlantic Refining Co., moved 12,357,506 bbl., against 10,512,728 in 1937. Susquehanna Pipe Line Co., subsidiary of Sun Oil Co., carried 12,422,979 bbl. in 1938 and 12,378,456 bbl. in 1937, while Phillips Pipe Line Co., subsidiary of Phillips Petroleum Co., ran 12,344,714 bbl. in 1938, compared with 10,840,113.

Japanese Are Reported Seizing American Oil Properties

A dispatch from Peiping, China, to International News Service reports failure of efforts to save leaseholds of foreign oil companies in North China. Standard Oil Co. of New York and Asiatic Petroleum Corp. were said to have been ordered by the Japanese to give up their leased storage tanks and sidings along the Peiping-Suiyuan railroad. Military necessity was the reason assigned.

Retail Automobile Sales Up 44 Per Cent in May

NEW YORK, June 26.—Retail sales of passenger cars and trucks to the number of 321,614 during May represented an advance of 44 per cent over last year, the Automobile Manufacturers Association reports. Included were 275,457 passenger cars and 46,157 trucks. The gain in passenger cars was 47 per cent; trucks gained 30 per cent.

By comparison with April, which in some years has been the peak month, May this year revealed an increase of 3.6 per cent in passenger cars and 2.2 per cent in trucks. This represents a gain of 3 per cent for the two classes of vehicles combined.

During the 5 months ending with May, 1,382,793 motor vehicles were sold, equivalent to a gain of 40 per cent over the 988,912 units sold up to the corresponding point last year.

Of the total, 1,164,149 units were passenger cars and 218,644 were commercial vehicles.

Passenger cars gained 43 per cent, trucks 26 per cent in the 5-month period, respectively.

Secretary of New Commerce Department of Pennsylvania

Richard P. Brown has been appointed by Governor Arthur H. James to be the first secretary of the new Department of Commerce of the Commonwealth of Pennsylvania. Mr. Brown is former president and now chairman of the board of the Brown Instrument Co. and vice president of Minneapolis-Honeywell Regulator Co., and has been interested for some years in the industrial development of Pennsylvania, with the objective of increasing the number of jobs in private industry and thereby reducing the relief load and in turn the taxes necessary to support those on relief.

The new Department of Commerce is not only to aid Pennsylvania's industries in expansion and development, but it was also authorized by the commerce law to recommend future legislation to the legislature which can be of help to Pennsylvania industries.

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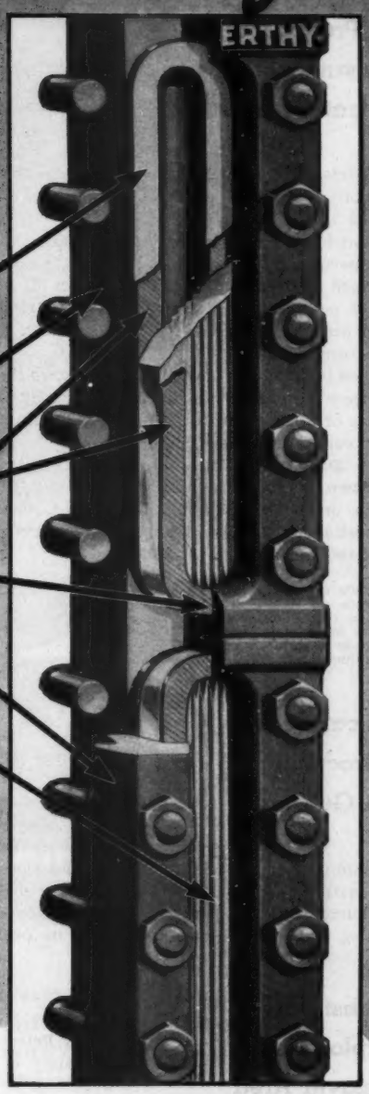

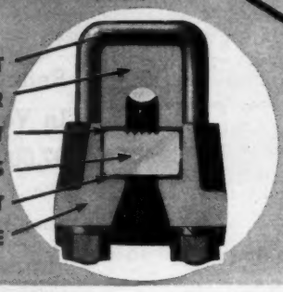

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INTERNATIONAL

Mexican Production Under Private and Government Operation

Crude oil production in Mexico during April totaled 3,074,374 bbl., a slight increase over the preceding month's output reported at 3,053,254 bbl., according to the United States commercial attache in Mexico City. Production for March 1938, the first 18 days of which was under the operating jurisdiction of private companies, totaled 3,982,489 bbl. In April 1938, the first full month of government operation of most of the properties, production dropped to 2,129,297 bbl. Total exports of petroleum in April 1938, amounted to 314,163 bbl.; exports in April 1939, totaled 1,405,156 bbl.

Exports of petroleum and products by countries in March 1939, are given in the accompanying table in cubic meters. Multiplication by the factor 6.2905 equals United States barrels.

The detailed breakdown of April exports shows that almost 60 per cent of all shipments went to Great Britain. This may be deceptive in view of the practice of routing tankers to Lands End with diversion orders later wirelessed to conceal the exact destination. Shipments to Germany during April totaled 304,875 bbl. The only important shipments to the United States are shown as crude gasoline amounting to a little more than 125,000 bbl. in March, or about 4,033 bbl. daily which is thought to represent receipts at Houston for account of Eastern States Petroleum Co.

Details of the April shipments follow:

	Cm.
Exports of crude oil with a density of 0.96 or lower during March 1939	55,150
Exports of crude oil with a density higher than 0.96	69,680
Exports of fuel oil	70,071
Exports of gas oil during March 1939	29,759
Exports of crude gasoline	28,429
Exports of refined gasoline	12,908

Geophysical Search For Oil Proceeding In British Guiana

Geophysical exploration for oil is being conducted in British Guiana by a crew of Seismograph Service Corp. which is operating there for Central Mining & Investment Corp., of London, a gold mining syndicate having large concessions in that country, according to the Daily Chronicle, Georgetown, British Guiana. No oil seeps have been found in the area being explored. Attention is being given to oil possibilities in British Guiana because of its proximity to Venezuela.

Jersey Subsidiary Plans Exploration In Yugoslavia Area

Yugoslav Petroleum Exploration Co., a subsidiary of Standard Oil Co. of New Jersey, is preparing to launch an extensive exploratory campaign in Yugoslavia. This company was organized in 1936 but it was not until last year that an acceptable agreement was reached with the government covering extent of concessions, taxes and similar matters. Private companies were admitted to explore for oil in Yugoslavia a year ago when a basic change was made in regulations which previously restricted the petroleum search to a national monopoly.

Successful development of the increasingly important Lispe field in Hungary near the Yugoslavia frontier by Hungarian-American Oil Co. was an important factor in causing the neighboring country to modify its prohibition against private exploration. The Lispe field is producing more than 2,000 bbl. per day which is being moved 15 miles by a short pipe line to the nearest railroad point and by tankcar to Budapest for refining.

Another important factor is reported more recently as acquiring an interest in Yugoslavian petroleum exploration. Rudokop Mining Co., Ltd., has been organized in Germany under the sponsorship of the Prussian State Mining Co. for the purpose of entering the Yugoslavian petroleum search. As a nucleus for its operations the Rudokop company is reported to have acquired or to have reached an agreement for acquisition of concessions granted in 1938 and 1939 to Pannonia Co., Ltd. Part of the Pannonia concession territory is on the Hungarian-Yugoslavia frontier facing the Hungarian-American Oil Co. productive concession near Lispe.

Yugoslavia has been a minor producer of oil for several years but recovery under state sponsorship totaled only about 8,000 bbl. last year. Production, so far, is obtained principally from Sava-Banat, at Selnica and Baljevac. Showings have been developed at various points along the Hungarian frontier and in the central and southern districts of the country. Potential prospects are regarded favorably in Drina-Banat in the western district near the town of Tuzla, where the state has done a limited amount of drilling, and in Morava-Banat, near Kladovo.

Still a third factor in the Yugoslavian petroleum exploratory prospects is the Swiss-owned "Holdinghand" Co. of Chur which last year acquired the Medjumursko Petrolejsko Co., a concern that has drilled several test wells at Selnica, near Mursko Sredisce. The Swiss company has increased its capital to approximately $250,000 and is reported planning a more active participation in the exploratory work.

Hungarian-American Oil Co., affiliate of Standard of New Jersey, has completed a well producing about 300 to 400 bbl. per day near Magyarszentmiklos, about 20 miles northeast of Lispe. The oil is similar to that obtained from the Lispe field but there appears to be a syncline between.

Three Deep Tests Are Scheduled in The Oficina Field

Wildcat territory west and southwest of the productive Oficina field in eastern Venezuela is scheduled for three deep tests and three others in scattered sections are definitely planned. Standard Oil Co. of Venezuela has announced two new locations on concessions owned jointly with Pantepec under a development contract. Rig is being moved to location for Standard of Venezuela No. 1 Socororo, about 35 km. west of Oficina and the same company has made location for No. 1 Santa Clara, about 60 km. southwest of Oficina.

Socony-Vacuum Oil Co. is rigging up on No. 1 Carrizal, about 35 km. southwest of Pariaguan and almost 100 km. west and a little south of Oficina, in the district of Monagas in the State of Anzoategui.

Guarico Oilfields, Ltd., has abandoned No. 1 Guayabo at 5,380 ft. but has made location for No. 2 and is moving in material for No. 1 El Machete in the State of Guarico.

Refinery Production In Venezuela Was 37,000 Bbl. Daily

The seven refineries in Venezuela processed a combined total of approximately 37,000 bbl. of crude daily during April. Within a year the refining capacity and daily throughput will be increased by approximately 20,000 bbl. daily by additions that are currently under construction by Standard at Caripito.

Details of April refining activity reported through the Department of Commerce follow:

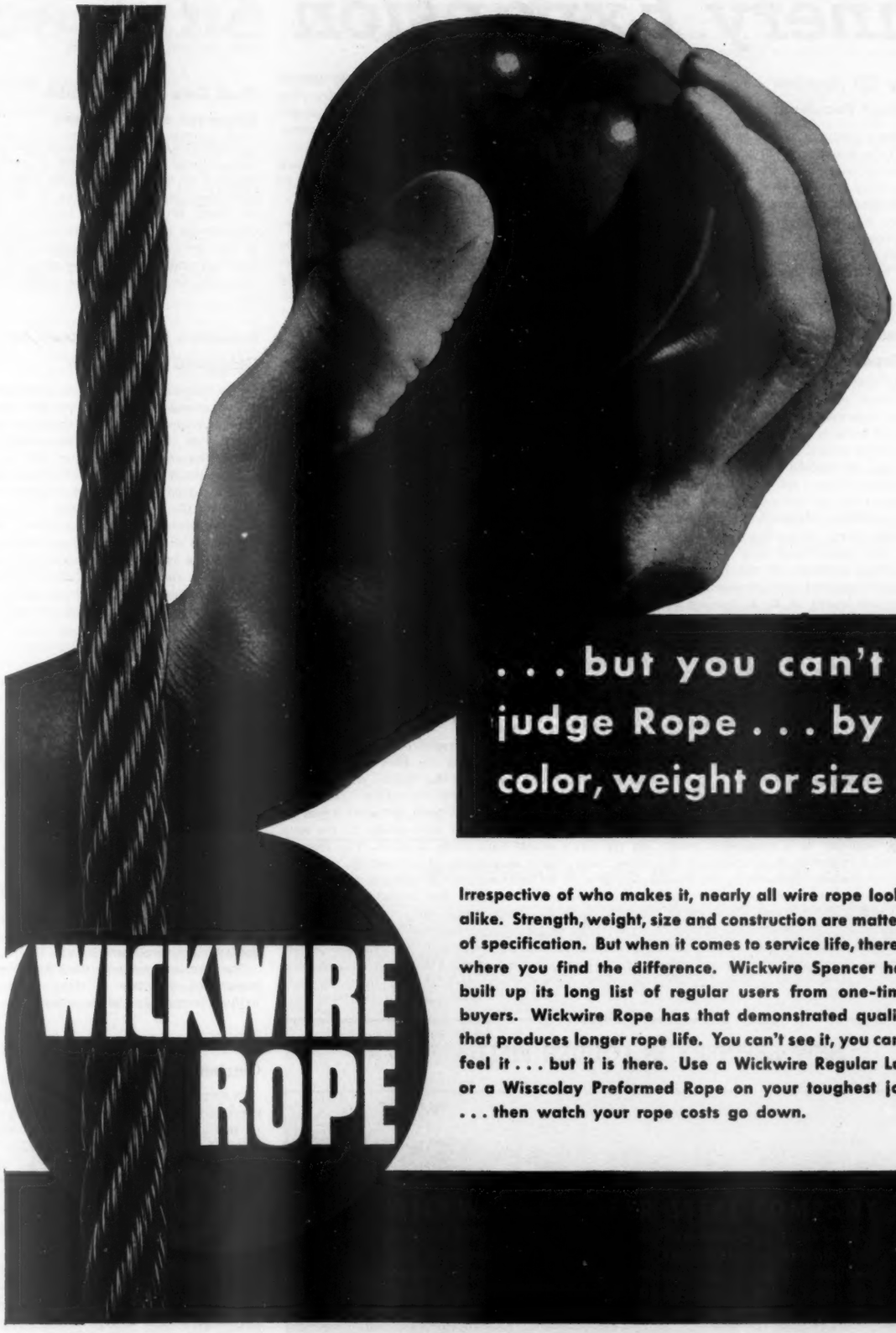
Company—	Metric tons
Caribbean Petroleum Co., Refineria de San Lorenzo	94,962.572
Mene Grande Oil Co., C.A., Refineria de Cabimas	8,469.354
Compania de Petroleo Lago, Refinerias de La Salinas y La Arriga	36.143.267
Colon Development Co., Ltd., Refineria de El Cubo	1,231.446
British Controlled Oilfields, Ltd., Refineria de El Mene de Mauroa	999.186
Standard Oil Co. of Venezuela, Refineria de Caripito	20,573.306
Mene Grande Oil Co., C.A., Refineria de Oficina (Edo. Anzoategui)	664.780
Total	163,043.911

New Zealand Test Reported Drilling Below 4,310 Feet

New Zealand Petroleum Co., Ltd., is drilling below 4,310 ft. on its wildcat test in the east central part of the north island of New Zealand, near Gisborne, in what is known as the Poverty Bay district. The company, controlled by Vacuum Oil Co. Proprietary, Ltd., Standard Oil Co. of California, and a national New Zealand group, holds a license in the Gisborne area covering approximately 900 square miles. Drilling on the test was started during the final half of 1938.

The company also holds a license covering approximately 1,000 square miles in the Taranski district in the western part of the north island where the only production in the country is obtained. None of the few small wells in the Taranski district has been considered of commercial importance although approximately 4,500 bbl. were produced in 1938.

The drilling test reached a total depth of 4,465 ft. when caving hole necessitated redrilling from around 4,200 ft. Cleaning out and redrilling progressed to 4,310 ft. where 9⅝-in. casing was set. Drilling below 4,310 ft. in reduced hole was to have been resumed last week.



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Irrespective of who makes it, nearly all wire rope looks alike. Strength, weight, size and construction are matters of specification. But when it comes to service life, there's where you find the difference. Wickwire Spencer has built up its long list of regular users from one-time buyers. Wickwire Rope has that demonstrated quality that produces longer rope life. You can't see it, you can't feel it . . . but it is there. Use a Wickwire Regular Lay or a Wisscolay Preformed Rope on your toughest job . . . then watch your rope costs go down.

Refinery Expansion

American Liberty Oil Acquires Interest in Southport Petroleum

HOUSTON, Tex.—As a result of recent negotiations, American Liberty Oil Co. (Golding & Murchison), Dallas, Tex., has acquired a substantial stock interest in Southport Petroleum Corp. In the new affiliation of the two companies, Southport will retain its corporate existence and identity. No changes in official personnel or control are proposed. Through this arrangement, American Liberty Oil Co. has an outlet for crude through Southport's refineries at Texas City and Kilgore, Tex.

Data on Inflammability Of Gases and Vapors

A knowledge of the limits of inflammability of gasoline and benzol vapors, natural and manufactured gas, blast-furnace gas, hydrogen, acetylene, and many other gases is of equal importance in the prevention of gas explosions and fires in the metallurgical, petroleum, gas-manufacturing, and related industries.

Combustible substances, which a few years ago were made only on a small scale in the laboratories, are now being made and used on a large scale. Many of these newer substances form dangerously explosive mixtures with air. Data concerning their limits of inflammability are widely scattered in the literature and many of the values reported seem contradictory. In a revised edition just issued of U. S. Bureau of Mines Bulletin 279, "Limits of Inflammability of Gases and Vapors," by H. F. Coward and G. W. Jones, a comprehensive survey covering the period from about 1800 to the present time has been made and over 100 new references added. The data have been arranged, coordinated, and critically reviewed. Many values on the limits of inflammability of gases and vapors are given that have not hitherto been published.

Petroleum Chemistry Discussed At A.C.S. Symposium

MADISON, Wis.—Evidence that heat causes big petroleum molecules to "explode" into fragments, each an incompleted part of a molecule, was presented at the American Chemical Society Symposium on the Kinetics of Homogeneous Gas Reactions today by Professors F. O. Rice and K. F. Herzfeld of the Catholic University of America, The Washington, D. C., scientists have made calculations which support the theory that the big molecules "blow up" into radicals, as the fragments are called, instead of breaking directly, in a single step, into two smaller molecules by a simple rearrangement of the big molecule. The largest commercial development involving the application of heat to organic compounds is in the petroleum industry, it was pointed out.

$50,000 to Be Spent for Remodeling Cushing Plant

CUSHING, Okla.—The Cushing Refining & Gasoline Co. is completing a $50,000 remodeling program, according to an announcement by Rex Winget, vice president and general manager of the plant.

The remodeling consists primarily of the construction of a new crude unit which will be in operation soon. An 85-ft. tower, weighing 51 tons, was constructed last week. The refinery has also completed the laying of 9,000 ft. of 6-in. pipe line running from the Illinois refinery north of the city to the Cushing plant. This will connect with the Carter Oil Co. lines which were recently leased by the Cushing refinery. Approximately 2,000 bbl. of oil per day will be carried through the lines from the Crescent and Ramsey pools to the Cushing plant.

Colloidal Motor Fuel Tested at Chicago

CHICAGO.—Exhibiting the possibilities of their newest development, "liquid coal," scientists of the Research Foundation of Armour Institute of Technology recently showed how it was possible to operate and drive a 1939 stock model automobile (Pontiac 8-cylinder sedan) on coal suspended in gasoline and oil. This is a development of the research of Dr. Francis W. Godwin, director of the coal research division of the Research Foundation of Armour Institute of Technology.

The test with coal was made on a standard car engine without any changes of any kind in carburetion or in the ignition system of the motor, with the exception of the removal of one fine-screen filter.

According to Dr. Godwin, three different types of colloidal fuel have been used successfully in the tests on the stock model automobile to date. The first of these fuels was a suspension of a specially prepared coal, ground to 300 mesh in a mixture of gasoline, fuel oil, and lubricating oil. The second test with the "liquid coal" was made with a suspension of the coal in a Diesel oil. The third test was made with a suspension of the coal in a very light oil. The recent test and demonstration was carried out with a more elaborate preparation of the fuel. A very light oil, or a form of range oil with a light fraction of hydrocarbon was used as the vehicle, followed by special treatment with the coal, resulting in the suspension of coal of about 500 mesh. In each case, before the "liquid coal" was introduced into the auxiliary fuel tank on the automobile, it was chemically stabilized in order to hold the coal in suspension.

Shell Gets Largest Tanker Shipment at Milwaukee

MILWAUKEE, Wis.—What is said to have been the largest cargo of gasoline ever to reach Milwaukee was received at Shell Oil Co. bulk plant at Jones Island here from the tanker Martha E. Allen of Lake Tankers Corp. It consisted of 1,401,546 gal. City Harbor Commission officials said it was three times the size of any previous gasoline cargo reaching Milwaukee. Railroad tankcars had to be provided to take the excess that the plant's storage tanks would not accomodate.

Inspection Rules Proposed by Oklahoma Commission

The Oklahoma Corporation Commission Friday will hear a group of refiners, blenders, and marketers of petroleum products about the new rule—House Bill 437—which calls for the inspection of refined oils within the state on and after July 1.

A set of 26 rules for the handling and regulating of the sale of gasoline and other products has been proposed by the commission, and it is up to refiners or manufacturers, importers, jobbers, and retailers to familiarize themselves with the rules.

One rule calls for the resumption of posting of a distillation chart at each filling station, setting forth gravity, boiling point, endpoint, and other facts about each particular grade of motor fuel, or burning oil handled for sale.

Paola Producers Consider Building a Refinery

Consideration is being given to the construction of a refinery by a group of oil and gas producers who operate properties in the vicinity of Paola, Kans.

New Company Acquires Refinery Near Princeton, La.

SHREVEPORT, La.—The recently organized Pennant Refining Co. of Shreveport will take over the operation of the Lake-Price Refining Co. lube plant near Princeton, La.

The Lake-Price plant had been processing about 500 bbl. of Bellevue crude daily before it discontinued operations several months ago.

The Pennant company filed its charter here several weeks ago with Ben H. Gray, D. H. Christman and Arthur Sample, Jr., as its officials.

Standard of Ohio Expanding Cincinnati Unit

CLEVELAND, Ohio.—As part of a $500,000 improvement program in Cincinnati district announced earlier in the year, Standard Oil Co. of Ohio will build a large warehouse, gasoline tank farm, and an office building for sales and distribution department personnel, according to A. B. Caldwell, manager of Cincinnati division.

St. Louis Refinery Will Have 3,000-Bbl. Capacity

ST. LOUIS, Mo.—R. G. Matthews, who until April 1 was secretary-treasurer of the Centralia Refining Co., is building a 3,000-bbl. refinery on the banks of the Mississippi at 9800 South Broadway in St. Louis.

Mr. Matthews said his company planned to refine only Illinois crude, most of which will come from the Lake Centralia-Salem field.

L. R. Flori, president of the Flori Pipe Co. is vice president of the company.

Practically the entire output of the refinery will be marketed in East St. Louis and St. Louis.

NEW REFINERY IN LOUDEN FIELD

New equipment ready for erection at the Allied Refining Co. plant at St. Elmo, Ill. The refinery is at the edge of the Louden field, and is in the heart of the agricultural section which requires large quantities of gasoline

Pipe Line Activity

England Reported Interested By Canadian Mission

CHATHAM, Ont.—Returning from a mission to England, in which he was accompanied by W. F. Knode, chairman of the conservation board, Dr. G. S. Hume, of the Geological Survey of Canada, and W. S. Campbell, oil operator; N. E. Tanner, minister of lands and mines for Alberta, stated:

"We were well received in London and great interest was shown in oil development carried on in Alberta and the possibility of future development both in Turner Valley and in other structures. The delegation was successful in presenting authentic information besides establishing a contact which should result in much future oil field progress.

"It was generally recognized that construction of a pipe line would tend to encourage and increase the rate of oil development in the province and the feeling favored a pipe line to the head of the lakes as an outlet to markets where it could serve the greater part of Canada and make a contribution to Empire interests. There would be sufficient crude oil under production in the province by the time a line was built, even if construction were to start immediately."

Socony-Vacuum Completes Big Muddy-Casper Line

CASPER, Wyo.—Socony-Vacuum Oil Co. has completed and is putting into operation a 20-mile 4-in. welded pipe line from the White Eagle refinery in East Casper to a connection with the Continental Oil Co. gathering system in the Big Muddy field. Continental has contracted to sell to Socony-Vacuum Big Muddy crude to the extent of about 1,250 bbl. daily. This crude heretofore has been run from the field to the Continental refinery at Glenrock. It will be replaced with an equal quantity of Leo sand crude from the Lance Creek field which will run through the Continental 65-mile 4-in. line recently completed from the Lance Creek pump station to the refinery at Glenrock.

Pipe Lines Made Common Carriers in Alberta

EDMONTON, Alta.—By order-in-council, the Alberta government placed all pipe line facilities in Alberta now owned by private interests under the jurisdiction of the Alberta Public Utilities Commission, thus making them common carriers. The order affects Royalite Oil Co. pipe lines from Turner Valley to Calgary.

Birk City Field Has New Pipe Line Outlet

OWENSBORO, Ky.—The Birk City field, near Henderson, Kentucky, has a new 19-mile 3-in. pipe-line outlet. The line carries the field's crude to a refinery on the banks of Green River. The carrier is owned by Crude Oil Purchasing Co., of which R. Hal Compton, of Fort Worth, is president. The oil-purchasing company also has 28 miles of connections in the field, which produces from the McClosky lime at 1,900 ft.

Panhandle Eastern-Mokan Distribution Order

NEW YORK.—Panhandle Eastern Pipe Line Co. is preparing a registration statement to be filed with the S.E.C., covering an issue of 80,000 shares of common stock, J. D. Creveling, president, announced.

This action was decided upon, Mr. Creveling stated, when news was received that Chancellor William Watson Harrington of the Chancery Court of Delaware had signed an order at Wilmington approving a plan for the distribution of these 80,000 Panhandle Eastern shares, pro rata, to stockholders of Missouri Kansas Pipe Line Co.

A warrant for the number of shares is held by the receivers of Missouri Kansas. The court had previously directed the receivers to distribute the shares to Missouri Kansas stockholders. The registration statement to be filed by Panhandle Eastern will cover the stock to be issued under this warrant.

Natural Gas

Charter Granted to Eureka Company at Houston

HOUSTON, Tex.—A state charter was granted to Eureka Gas Corp. recently organized by Jack W. Frazier, oil man, to bring cheaper natural gas into the city for sale to the city of Houston and to industrial consumers. The company has capital stock of $100,000. Those listed as incorporators were Mr. Frazier, Miss Bernice Dowe, his secretary, and William H. Becker, Jr., office manager.

The company plans to lay 22 miles of pipe line from the Eureka gas fields into Houston at an approximate cost of $350,000 and to sell gas to the city-owned Magnolia Park gas system, to municipal buildings, and to industrial consumers. It is attempting to work out a proposed contract with the city under which gas would be sold to the city for 9 cents per 1,000 cu. ft.

Southern California Users To Get Reduced Bills

LOS ANGELES, Calif.—Thousands of customers of Southern California Gas Co., including nearly 700,000 domestic and commercial users in the vicinity of Los Angeles, will save on substantially reduced gas bills on and after June 30, according to announcement by Ray L. Riley of the California Railroad Commission.

"These particular users," said Mr. Riley, "will receive practically the entire $1,305,000 reduction recently announced by the commission."

According to figures by the commission reductions in the rates in the territory served by the company have amounted to $6,684,740 since 1930.

Oklahoma Natural Profit

Oklahoma Natural Gas Co. for 12 months ended May 31 earned $2.24 a share on the common stock, compared with $1.83 a share for the same period ending May 31, 1938.

Natural Gasoline

Arkansas Fuel Builds New Plant at Shreveport

SHREVEPORT, La.—Shreveport Fuel Co. is building a gasoline plant in the Shreveport field which is to have a capacity of 25,000,000 cu. ft. The gas has a gasoline content of a half gallon per thousand cubic feet. The plant is located on the site of the old Loreco refinery. According to present plans the plant will be on stream late in August.

Outlet for Residue Gas Provided for Joaquin Plant

HOUSTON, Tex.—United Gas Service Co., of Houston, is reported preparing to build a 6-in. pipe line costing approximately $140,000 from the basal Glen Rose gas production in the Joaquin area of northeastern Shelby County, Northeast Texas, to a point near Mansfield, La.

Portex Oil Co. has a recycling plant in the Joaquin area, and the new line will give an outlet for the processed gas. Right of way is reported to have been purchased, and pipe line crews moved into Mansfield to start work.

Sam Hunter, of Logansport, who has gas production in the vicinity of Logansport, is reported planning to build a new line from his wells to the Portex recycling plant for processing.

GATHERING PUMPS IN THE SALEM FIELD

Gathering pumps are an important part of a pipe line system and when flush production threatens to flood a field, more must be added. These three are located along the Selmonville siding of the Missouri & Illinois Railroad in the Salem field, Illinois; they deliver to Illinois Pipe Line Co. and Central States Pipe Line Co. systems

PROGRAMS AND MEETINGS

A.A.P.G. Annual Meeting To Be Held in Chicago

The twenty-fifth annual meeting of the American Association of Petroleum Geologists will be held at the Stevens Hotel, Chicago, April 10-12, 1940, at the invitation of and sponsorship by the Illinois Geological Society.

The officers of the association are: President, Henry A Ley, Southern Cross Oil Co., San Antonio, Tex.; vice president, L. Murray Neumann, Carter Oil Co., Tulsa; secretary-treasurer, Edward W. Owen, L. H. Wentz, Inc., San Antonio, Tex.; editor, Walter A. Ver Wiebe, University of Wichita, Wichita, Kans.; and past president, Donald C. Barton, Humble & Refining Co., Houston, Tex.

The officers of the Illinois Geological Society are: President, Verner E. Jones, Magnolia Petroleum Co., Mattoon, Ill.; vice president, M. W. Fuller, Carter Oil Co., Mattoon; secretary-treasurer, Elmer W. Ellsworth, W. C. McBride, Inc., Centralia, Ill.

A.S.T.M. Nominations Made For September Election

Nominations for officers of the American Society of Mechanical Engineers for 1940 were announced at a recent meeting of the national nominating committee held at State College, Pa. Election will be held by letter ballot of the membership, closing on September 26.

The nominees as presented by the nominating committee are: President—Warren H. McBryde, consulting engineer, San Francisco; vice presidents, Kenneth H. Condit, consulting editor, "American Machinist," New York; Francis Hodgkinson, honorary professor of mechanical engineering, Columbia University, New York; J. C. Hunsaker, head of department of mechanical engineering, Massachusetts Institute of Technology, Cambridge, Mass.; K. M. Irwin, assistant to vice president in charge of engineering, Philadelphia Electric Co., Philadelphia, Pa. Managers, J. W. Eshelman, president, Eshelman & Potter, Birmingham, Ala.; Linn Helander, head of mechanical engineering department, Kansas State College, Manhattan, Kans.; G. T. Shoemaker, president, United Light & Power Service Co., Chicago.

Society of Chemical Industry Election of Officers

The American Section of the Society of Chemical Industry announces the election of the following officers for the year 1939-40: Chairman, Wallace P. Cohoe, vice chairman, Lincoln T. Work; honorary secretary, Cyril S. Kimball; honorary treasurer, J. W. H. Randall. The following new committee members were elected to take the place of retiring members: L. W. Bass, J. V. N. Dorr, C. R. Downs, J. C. Hostetter, and E. P. Stevenson.

Gulf Coast Refiners Form Non-Profit Association

HOUSTON, Tex.—At a meeting of representatives of 10 Gulf Coast refiners plans were completed for the organization and incorporation under the laws of the State of Texas of a non-profit association under the name of Gulf Coast Refiners Association. It is the plan and purpose to secure and publish statistical information for the use of its members and the public. The following officers were elected: D. W. Hovey, vice president and general manager, Republic Oil Refining Co., Houston, president; Cornelius Kroll, president, Southport Petroleum Co., Houston, vice president; G. L. Rowsey president and general manager, Taylor Refining Co., Taylor, Tex., vice president; and L. F. Rothermel, president, Maritime Oil Co., Houston, treasurer. An executive secretary is to be employed.

Illinois Basin Chapter Of A.P.I. Organized

A resolution to form an Illinois basin chapter of the American Petroleum Institute, Division of Production, was adopted by 65 oil men from Illinois, Indiana and Kentucky fields in a meeting at the Hotel U. S. Grant in Mattoon, Ill.

William A. Watkins of Carter Oil Co. was elected chairman and Bart De Laat of Pure Oil Co. and Jake Haas of Adams Oil & Gas Co. were elected vice chairmen.

Texas Mid-Continent Meeting In Houston, October 5

HOUSTON, Tex.—The twentieth annual convention of the Texas division of the Mid-Continent Oil and Gas Association will be held here October 5 to 7, it was announced by H. R. Cullen, vice president for the Gulf Coast district.

Headquarters are in Dallas. Its officers are Charles P. McGaha, Wichita Falls, president; George C. Gibbons, Dallas, executive vice president; Eugene McElvaney, Dallas, treasurer, and the following vice presidents: H. R. Cullen, Houston; Al Buchanan, San Antonio; John F. O'Donohue, Wichita Falls; Lynn Boyd, Pampa; Harry Adams, Midland; A. J. Frazier, Abilene; J. L. Collins, Corsicana, and Bryan W. Payne, Tyler.

CALENDAR OF EVENTS

July

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, San Francisco, Calif., July 10-15.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, regional meeting, San Francisco, Calif., July 10-17.

INTERSTATE OIL COMPACT COMMISSION, Santa Fe, N. M., July 19-20.

AMERICAN SOCIETY FOR TESTING MATERIALS, San Francisco, Calif., July 23-30.

August

MICHIGAN OIL AND GAS EXPOSITION, Mount Pleasant, Mich., August 1-6.

KANSAS GEOLOGICAL SOCIETY, thirteenth annual field conference, jointly with Illinois and Missouri state surveys and Illinois Geological Society, in southern Illinois and eastern Missouri—August 30-September 3.

September

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, New York, September 4-8.

OIL WORKERS INTERNATIONAL UNION, Hammond, Ind., September 5.

AMERICAN CHEMICAL SOCIETY, Boston, Mass., September 11-15.

MONTANA NATIONAL BITUMINOUS CONFERENCE, Sun Valley, Idaho, September 11-14.

NATIONAL PETROLEUM ASSOCIATION, thirty-seventh annual meeting, Hotel Traymore, Atlantic City, N. J., September 13-15.

October

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division. Galveston, Tex., October 4-6.

TEXAS DIVISION, MID-CONTINENT OIL AND GAS ASSOCIATION, twentieth annual meeting. Houston, Tex., Oct. 5.

TEXAS MID-CONTINENT OIL AND GAS ASSOCIATION meeting, Houston, Tex., October 5-7.

AMERICAN GAS ASSOCIATION, annual convention, New York, October 9-10.

NATIONAL TAX CONFERENCE, Palace Hotel, San Francisco, Calif, October 16.

FORTIETH ANNUAL NATIONAL AUTOMOBILE SHOW, Grand Central Palace, New York, October 16.

NATIONAL SAFETY CONGRESS AND EXPOSITION, Chalfonte Haddon Hall, Atlantic City, N. J., October 16-20.

INDEPENDENT PETROLEUM ASSOCIATION OF AMERICA, tenth annual meeting, Fort Worth, Tex., October 18-20.

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, Petroleum Division, Los Angeles, Calif., October 19-20.

November

SOCIETY OF AUTOMOTIVE ENGINEERS, fuels and lubricants meeting, Mayo Hotel, Tulsa, November 2-3.

AMERICAN PETROLEUM INSTITUTE, twentieth annual meeting, Stevens Hotel, Chicago, November 13-17.

AMERICAN INSTITUTE OF CHEMICAL ENGINEERS, Providence, R. I., November 15-17.

December

WEST CENTRAL TEXAS OIL AND GAS ASSOCIATION, Abilene, Tex., December.

AMERICAN SOCIETY OF MECHANICAL ENGINEERS, Philadelphia, Pa., December 4-7.

February 1940

AMERICAN INSTITUTE OF MINING AND METALLURGICAL ENGINEERS, New York, February 12-15.

April

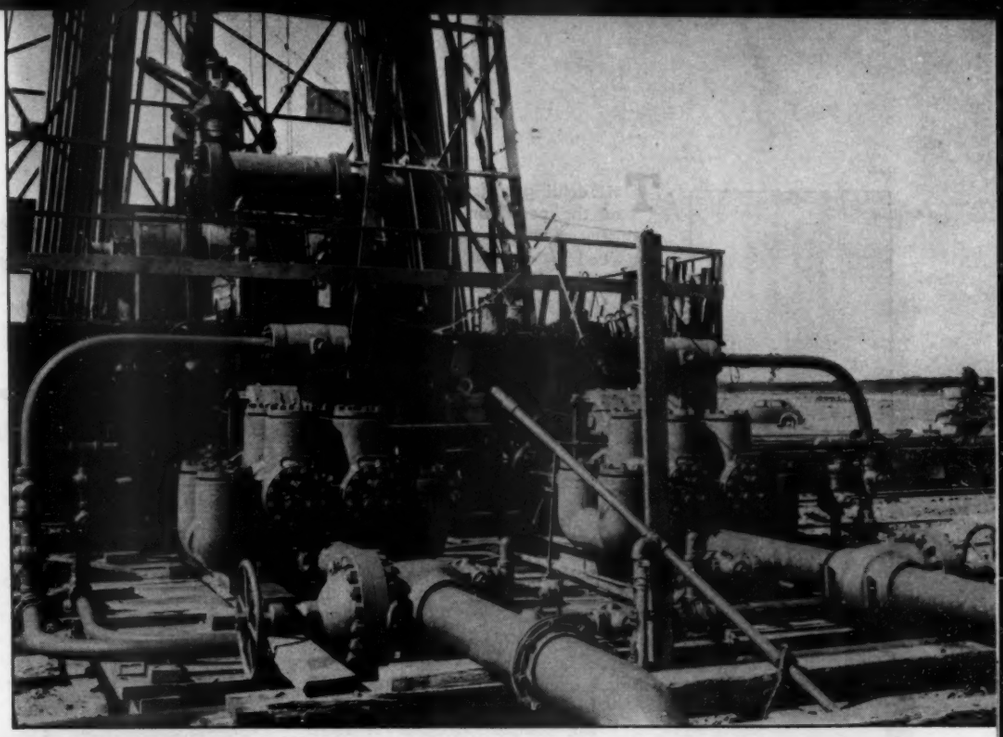
AMERICAN ASSOCIATION OF PETROLEUM GEOLOGISTS, twenty-fifth annual meeting, Stevens Hotel, Chicago, April 10-12.

May

INTERNATIONAL PETROLEUM EXPOSITION, Tulsa, May 18-25.

June

THIRD WORLD PETROLEUM CONGRESS, Berlin, Germany, June 9-15.



Large duplex steam pumps used on Louisiana Gulf Coast rig. Reel mounted over hoist is for operation of retractable core barrel. A complete analysis of the types of drilling equipment in use today is presented in the article starting on the following page.

ENGINEERING & OPERATING

JUNE 29, 1939

This Section

SURVEY OF DRILLING EQUIPMENT REVEALS ECONOMIC AND OPERATING DATA
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Survey of Drilling Economic and

By HARRY F. SIMONS

THE drilling branch of the petroleum industry spent approximately $90,067,000 during each of the past two years, a recently completed survey conducted by the Drilling Equipment Directory in conjunction with The Oil and Gas Journal reveals. This amount of money represents expeditures of all kinds, including the purchase of new equipment as well as supplies necessary to drill 32,560 tests in 1937 and 27,149 tests in 1938. Much of it goes for current supplies.

The survey was based on thousands of questionnaires sent out to drilling contractors and drilling departments of oil companies all over the country. The questions asked were: (1) The number of each type rig owned, (2) the number of wells drilled during 1936, 1937 and 1938, and (3) the average annual expenditure of each firm for drilling equipment.

The total number of rigs in the United States as revealed by the survey is approximately 8,000, which includes both rotary and cable-tool equipment. The average rig on that basis calls for an expenditure of around $11,250 annually. However, a considerable part of this money goes for new equipment, and a sounder means of estimating the amount spent for this type equipment would be on a company basis. The total number of firms engaged in the drilling business is in the neighborhood of 3,340. This results in a total expenditure of $27,000 annually for each of these drilling organizations.

That this figure is not out of line is evident after inspecting the individual expenditures of the drilling firms, one company alone spending $1,500,000 for equipment during a single year. There are several other drilling contractors that reported spending over $1,000,000 annually; this outlay naturally included several new complete rigs. Six firms reported that they spent over $750,000 annually and six more reported outlays between $500,000 and $750,000 every year. Fifty-eight drilling contractors and companies showed they spent between $100,000 and $250,000 annually and 31 firms reported they spent between $250,000 and $500,000. Even contractors ownings only one rig generally reported outlays in excess of $5,000.

The drilling firms reporting large expenditures fall into one of two groups: those doing an enormous amount of work or those building up their organizations through the purchase of new equipment. Drilling departments of several companies reported drilling over 800 tests annually, while several contractors reported drilling over 300 tests annually. The largest number of rigs owned by a single firm was reported to be 98 by a major oil company; the largest number reported by a drilling contractor was 63 rigs.

Drilling Expenditures

Drilling departments of oil companies drill approximately 6,100 tests per year or 20.4 per cent of the total wells drilled; their expenditures though are only $14,800,000 annually or 16.5 per cent of the total money spent. The drilling contractors spend close to $75,200,000 annually or 83.5 per cent in the drilling of 79.6 per cent of the holes. The difference does not indicate the comparable efficiency of the two branches of the drilling division but rather that the oil companies are generally able to adjust the work to suit their rigs whereas the contractor frequently has to purchase new items for a particular job.

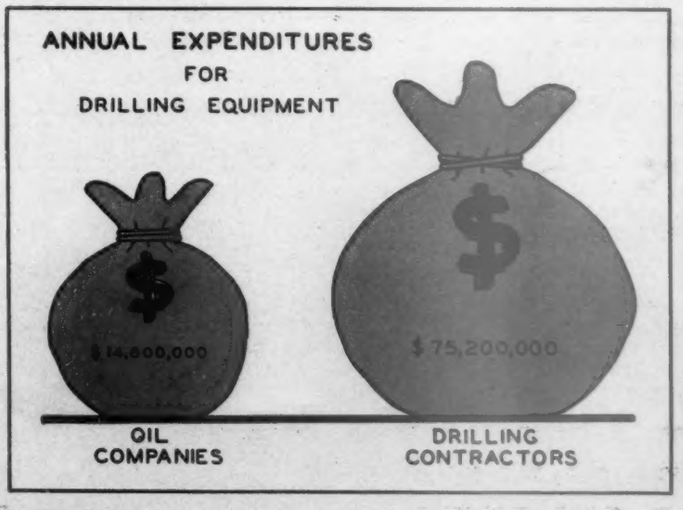
Contractors own 77.5 per cent of the total rigs and the oil company drilling departments account for the other 22.5 per cent. Most of the contractors' rigs are generally engaged in the development of fields while a great portion of the company-owned rigs are used for wildcatting. The differences in use probably accounts for the fewer tests drilled per rig by the companies.

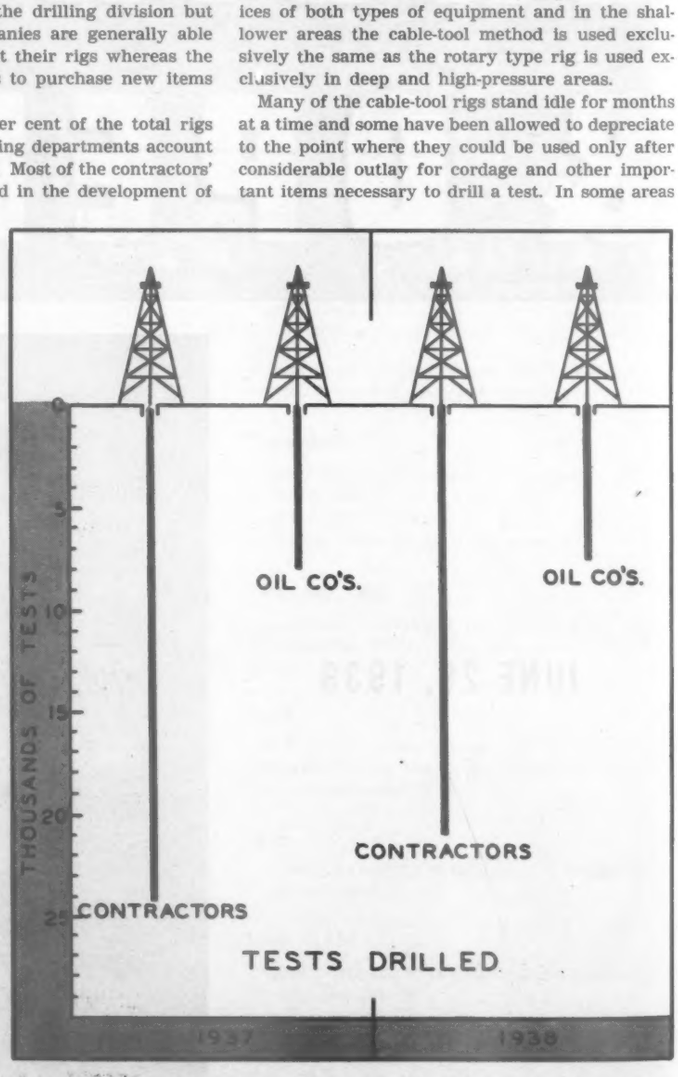
No effort was made to obtain the number of rigs in particular districts as they move so frequently that the situation is continually changing. The survey did not include the total footage drilled as it was only intended as an estimate of existing equipment. The rigs were classified as to types and not as to size.

A surprising feature in the drilling picture is revealed by comparing the total number of rotary rigs with the total cable tool rigs. The former accounts for 3,860 rigs or 47.2 per cent, while the latter accounts for 4,162 rigs or 52.8 per cent of the total. Many tests drilled annually require the services of both types of equipment and in the shallower areas the cable-tool method is used exclusively the same as the rotary type rig is used exclusively in deep and high-pressure areas.

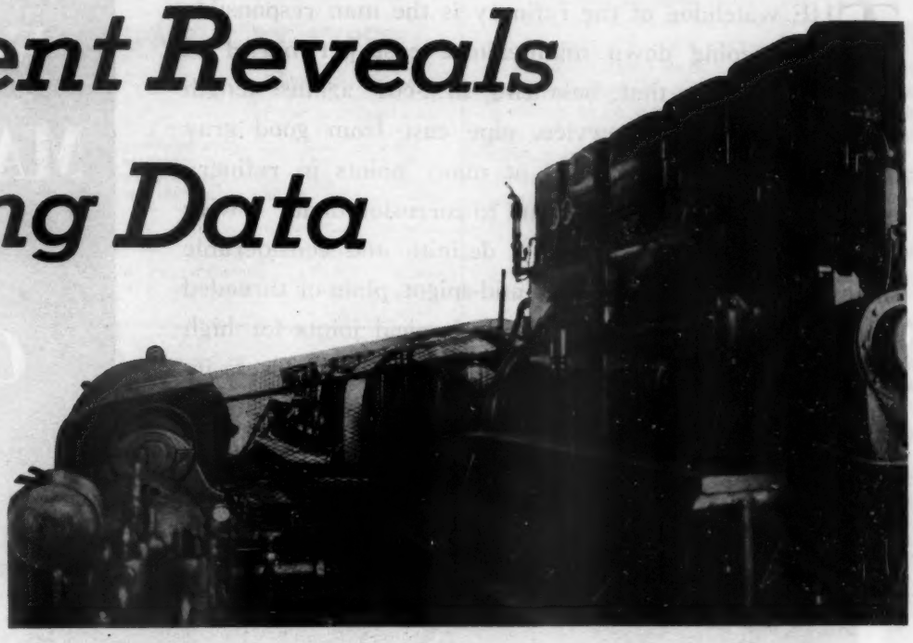
Many of the cable-tool rigs stand idle for months at a time and some have been allowed to depreciate to the point where they could be used only after considerable outlay for cordage and other important items necessary to drill a test. In some areas

Below: Drilling contractors spend over five times as much money annually for drilling equipment as do drilling departments of oil companies. Right: A breakdown of tests shows that drilling contractors do three times the work done by oil companies





Equipment Reveals Operating Data



Distribution of drilling equipment by types and ownership has heretofore been a matter of guesswork. A comprehensive survey was conducted by the Drilling Directory in conjunction with The Oil and Gas Journal, and the results are summarized in this article.

the operators of these rigs have not added any of the refinements introduced in recent years but prefer to run them with the older types of equipment.

There are no figures available on the amount of footage drilled by the two methods but it is certain that the greater share is done by the rotary method. Michigan, one of the strongholds of the cable-tool method, now has several rotary rigs at work and Kentucky, another "cable-tool state," is seeing considerable rotary development. At least 90 per cent of the drilling in the new Illinois fields has been with rotary rigs. In Kansas, Oklahoma and West Texas small amounts of work continue to be done with cable tools but the rotary rigs drill most of the footage.

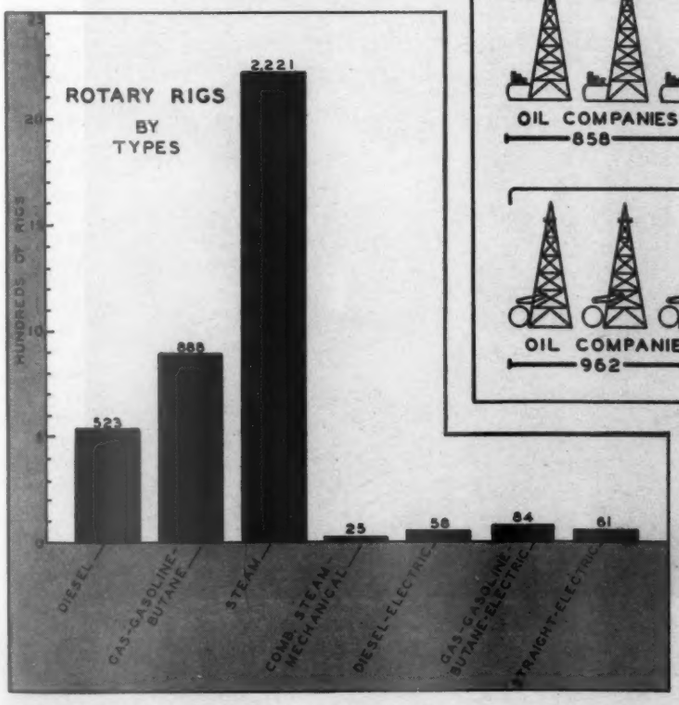
Over 2,220, or more than half, of the total rotary rigs use steam for the prime movers; other forms of power are used on the following number of rigs: Gas-gasoline, 888; Diesel, 523; Diesel-electric, 58; gas or gasoline-electric, 84; straight electric, 61; and combination steam and mechanical, 25. While no effort was made to classify the type of rigs by localities, it was noted that the areas having gas and water supplies, or areas where the drilling was exceptionally deep, used this type of equipment. Some deep areas have used the Diesel-electric type rig. The various types of mechanical rigs seem to find their maximum use in areas where the drilling is shallow or only of medium depth or where there is lack of fuel or water.

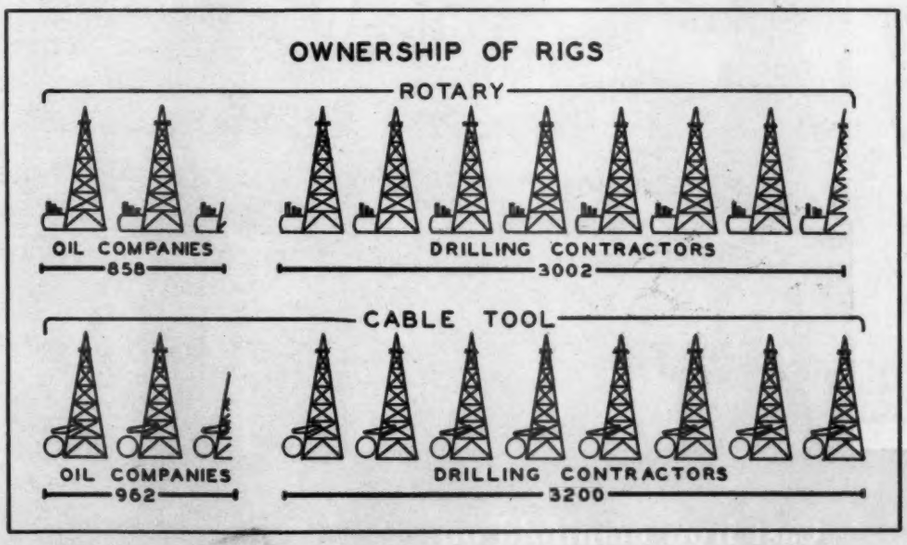
The division of cable-tool rigs showed that 953 use steam for motivating power; 1,117 are gas, gasoline or Diesel-driven; 1,232 are spudding machines; 681 are portable standard rigs, and 169 are combination rotary and cable-tool rigs. Scanning of the localities revealed that the territory east of the Mississippi River seemed to be the most favorable locality although there are many listed by contractors and companies operating in the Mid-Continent and California.

Practically all of the contractors and companies operating in "rotary" country own both rotary and cable-tool rigs. This is believed to be due to the many rotary contractors who came into the ranks from the cable-tool division. Some of this equipment is used infrequently to drill from top to bottom although it is often used for completion work.

Company-owned rigs are not used exclusively for drilling on the particular company's leases, the survey showed. Five hundred and ninety of the wells drilled by company tools in 1 year were on contracts for other producers. On the other hand,

Below: Of the drilling equipment in existence, steam-powered rotaries lead the field, with gas-gasoline-butane second and Diesel third. All others account for only 228 rigs as shown in the pictograph





Above: Oil companies own a total of 1,820 rigs, but contractors own nearly three and a half times that number, or a total of 6,204

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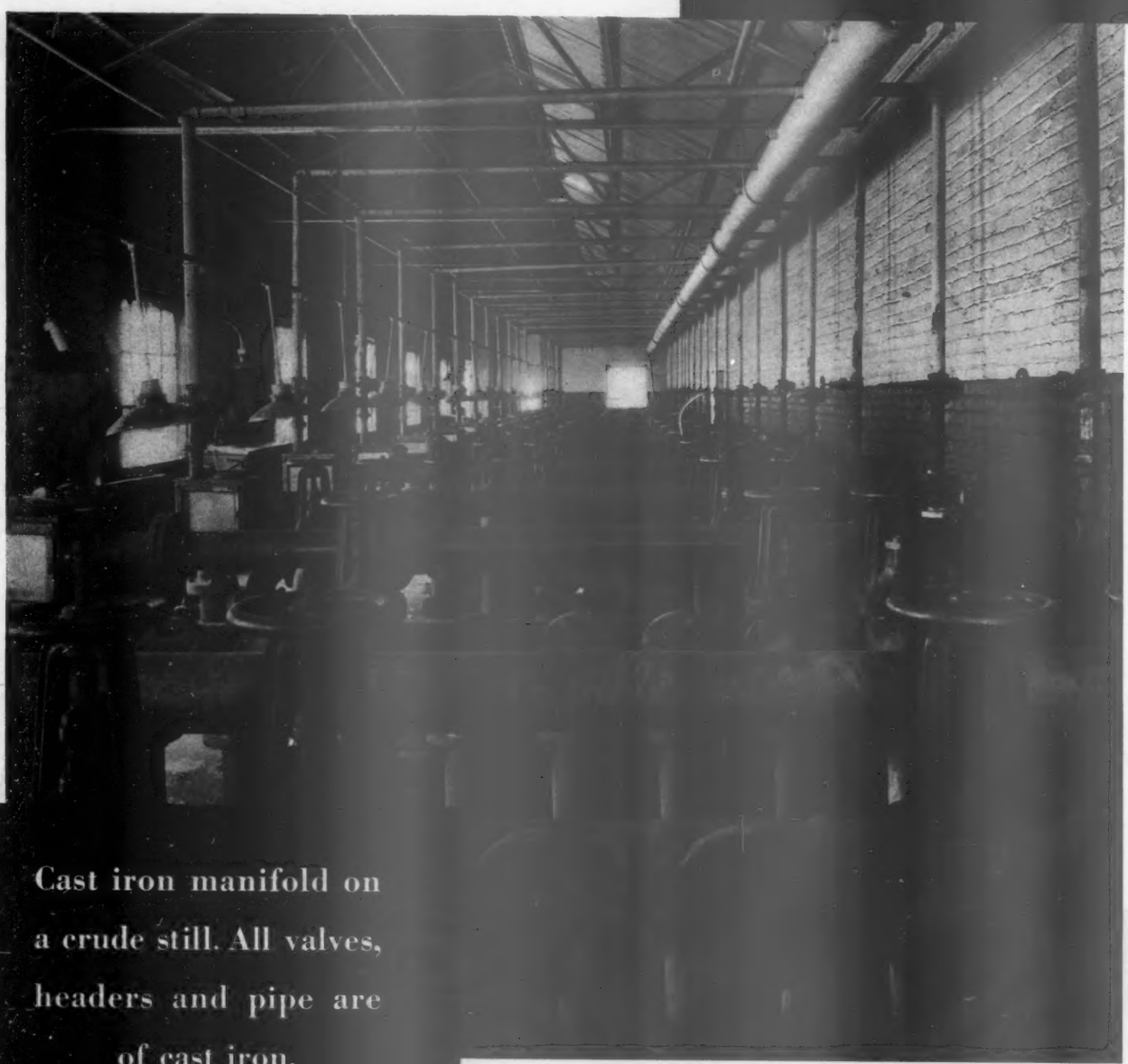


Cast iron manifold on a crude still. All valves, headers and pipe are of cast iron.

DISTRIBUTION OF DRILLING EQUIPMENT BY TYPES

Type—	Rotary rigs owned: Company	Rotary rigs owned: Contractor
Diesel	67	456
Gas-gasoline-butane	137	751
Diesel-electric	8	50
Gas-gasoline-butane-electric	4	80
Straight electric	25	36
Steam	611	1,610
Combination steam-mechanical	6	19
Total	858	3,002

Type—	Cable-tool rigs owned: Company	Cable-tool rigs owned: Contractor
Steam	61	443
Diesel-gas-gasoline-butane	164	455
Spudding machines	162	467
Portable standard rigs	97	261
Combination rotary-cable tool	8	81
Total	962	3,200

	1937	1938
Wells drilled by contractors	24,200	21,000
Wells drilled by companies	7,890	7,600

contractors do a lot of turnkey work. This type of contract seems to be becoming more prevalent with the contractor delivering the oil into the tanks for a flat price, the oil company specifying the casing and surface equipment to be used. No figures are available on the number of wells drilled on a "farmout" or on an oil-payment basis.

Of the total 6,200 rigs owned by contractors, 3,002 are rotary rigs while 3,200 are cable tool rigs; oil companies owning a total of 1,820 rigs have 858 rotaries and 962 cable-tool rigs. Many of the company-owned cable-tool rigs are used for cleanout and remedial work. Distribution of rotary equipment by types is shown in the chart.

The average drilling contractor owns 4.45 rigs, 2.12 of which are rotaries and 2.33 cable tools. The average drilling department of any oil company owns 1.8 rotaries and 2.75 cable-tool rigs for a total of 4.55 rigs. One reason for the large number of cable-tool rigs owned by oil companies may be that many small producers east of the Mississippi drill their own wells with spudding machines; an additional factor as pointed out before is the adaptability of this type equipment for repair and cleanout and repair work.

Decline Shown in 1938

While an average figure generally shows a purely theoretical case, in the drilling business is very apt to be an accomplished fact. Many contractors own fractions of a rig due to the replacement of equipment for a particular task. As more and more of this replaced material accumulates, it becomes nearer and nearer to a rig and when the occasion arises another rig is made available with the purchase of little additional equipment. This is particularly true of Illinois today, many of the rigs operating in that area being assembled from equipment that was once discarded as being too light for deeper areas.

In 1937 the 8,000 rigs in existence drilled 32,560 holes or an average of 4.06 tests each; in 1938 the drilling business declined and the same number of rigs drilled only 27,149 holes or an average of 3.4 wells each. The time required to drill the average hole is unknown but time varies on individual holes from a few days to a year and a half in unusual cases.

It is well known that much of the drilling equipment stands idle for varying periods and that it does not take 3.5 months to drill the average hole. It is evident that in cases of national emergency the total number of wells drilled in a year's time could be increased substantially. The down time on the rigs is an important factor as much of the overhead of the drilling contractor or company drilling department keeps on during this time. This must necessarily be added to the cost per foot of holes drilled; it explains in part why many companies prefer to contract their work instead of owning drilling rigs.

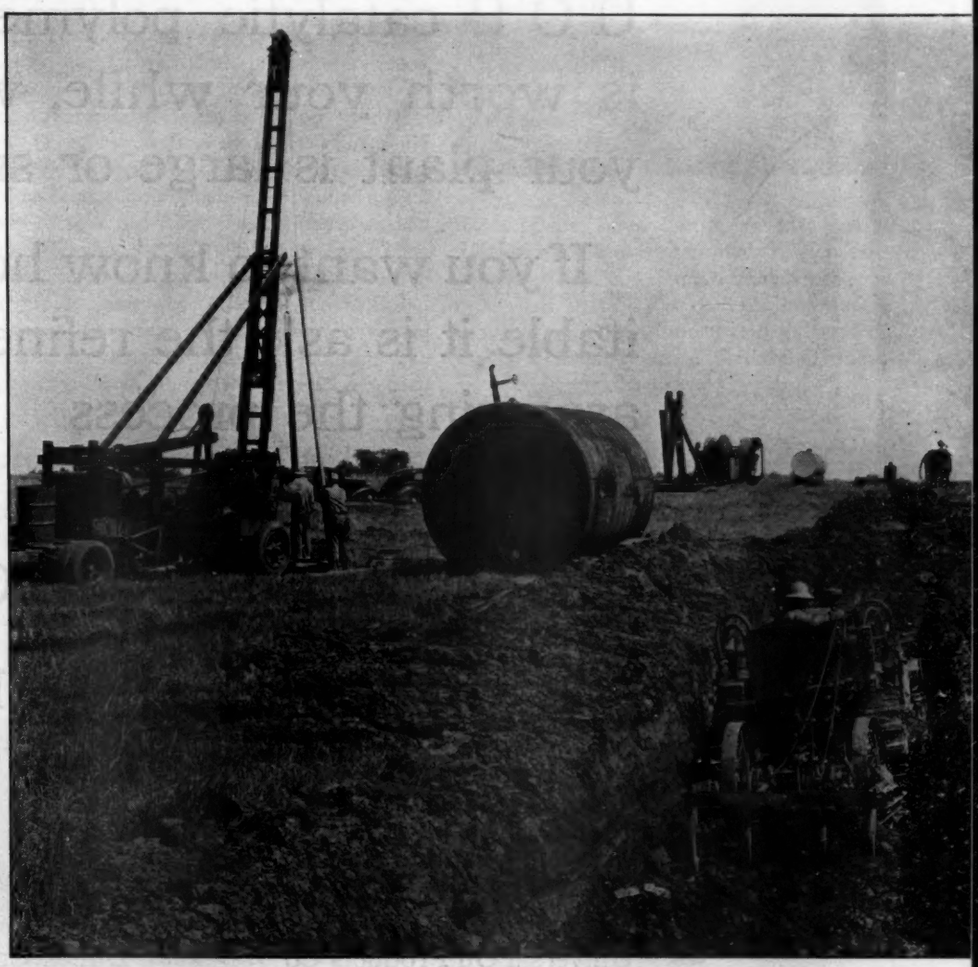
That slumps in the drilling business do not fall on all alike is evident from an inspection of the reports of the wells drilled annually by individual firms. Some contractors show the same number of wells drilled in each of the years reported while others show a decline in work, some reporting a large number of wells drilled in 1936, about half that amount of work for 1937 and none in 1938. There were also many firms that showed a steady increase in work over the same period and many new contractors came into the field in 1937 and increased their business during 1938.

In many cases this is due to the owner of the rig being unwilling to move into a new area, as he prefers to stay in his own locality and wait for favorable developments. Many of the new firms are offshoots of these more conservative contractors, one or more partners or employes purchasing part of this idle equipment and putting it in operation where there is more drilling activity.

The operation of company-owned drilling rigs is shown to be steadier by a comparison of the 1937 and 1938 figures. In 1937 company rigs drilled 7,890 tests and in 1938, 7,600 tests were drilled, a decline of only 3.7 per cent. The contractor-drilled wells dropped from approximately 24,200 to 21,000 or a decline of 13.2 per cent.

Oil companies doing a large amount of work generally hire a large share of it done and when drilling activity is reduced they use their rigs to do the essential work and the contractors' rigs are idle. Small producing companies owning only one or two rigs frequently drill tests on a partnership basis or prove up a block for part of the leases plus the dry-hole money.

While no complete survey was made of the cost or value of the rigs reported, some contractors and companies indicated this item. It ranges from $500 for a second-hand spudding machine used to drill wells of less than 1,000 ft. to $150,000 rotary rigs used to drill to below 10,000 ft. This variation is an indication of the comparative costs of drilling tests to different depths; the depreciation on the machinery used to drill a deep test being more than the cost of drilling and equipping a shallow hole.



Drilling equipment receives considerable abuse, as is evidenced by the above photograph which was taken recently in the Illinois basin. The spudding machine at the left is bailing down while attempting to complete a well; it is driven by a small multiple-cylinder internal-combustion engine. To the right of the 100-bbl. tank can be seen a portable standard rig partially disassembled, while at the extreme right can be seen the large internal-combustion engine and reduction gear for driving a rotary rig. The tractor in the foreground is digging a slush pit for a rotary drilling rig. The tank may be used for storing water for circulating fluid and for radiators

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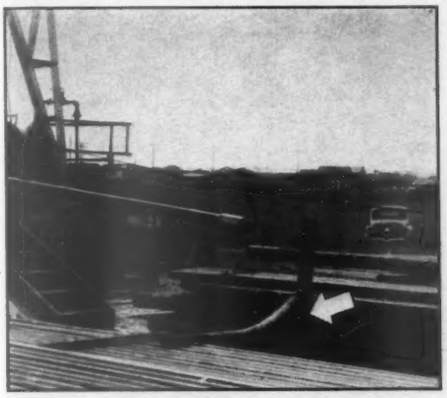
Operating Ideas

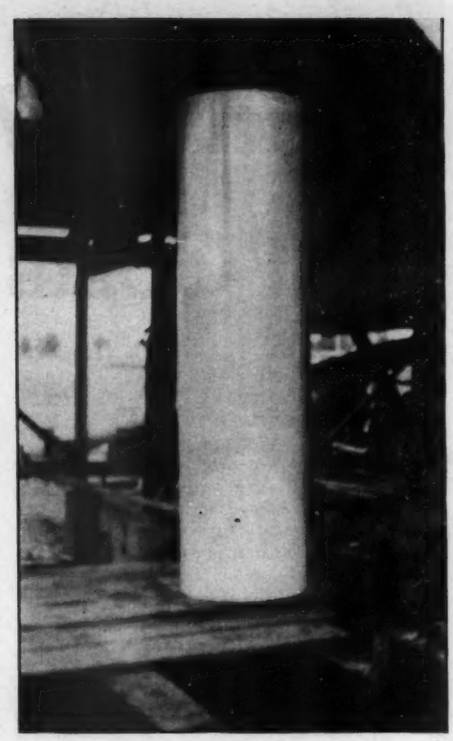
Adjustable Pipe Jack

Laying down of the drill pipe by the use of a trolley line is facilitated by an adjustable pipe jack built by the drilling crew. The jack is built from a pair of 2 by 6 in. boards and a piece of 3-in. pipe about 8 ft. long. The 2 by 6 in. boards with spacer and matching holes between them are bolted to the pipe rack sill. The bent piece of pipe has one end flattened, through which a hole is drilled. A bolt placed through the holes in the board and pipe permits elevation of the pipe as each layer is added to the drill pipe on the rack. By keeping the far side higher the pipe automatically rolls in place. One jack is placed at each end of the pipe rack and the drill pipe is lowered easily by reducing the tension on the trolley line.



Tool Counterweight Platform

Where tool counterweights are slung beneath the derrick floor, as is the practice wherever substructure conditions permit removing this much equipment from the working floor, one drilling contractor limits the downward travel of the weight by building a platform upon which the counterweight will come to rest when the tool has been elevated to the desired floor clearance. Tongs thus limited in lift do not become "skyed" if given too hearty a push by the tongman, but remain at the point predetermined by weight travel. Provision of a weight platform also stops the travel of the counterbalance in case the tong line breaks, and prevents loss of this piece of equipment in mud. This contractor also paints the counterbalance white, in order that checking of possible line stretch may be made easy and to aid in avoiding the counterweight when performing necessary tasks below the floor.



Exhaust Compressor Gases Used to Heat Control Valves

At one gas repressuring project in the Bryson field, Jack County, Texas, the operator has installed the heating device shown in the accompanying photograph to keep the control valves from freezing. All valves controlling the high-pressure discharge gas from the compressor are placed in the box which is heated by the exhaust line. Extensions to the valve stems allow for adjustment of the control valves without raising the lid. In the past the operator had serious trouble preventing these valves from freezing. After several preventive measures were tried with no success, the system now used was installed and has entirely eliminated the freeze-ups. The compressor used is an 85-hp. engine, two-staging the gas from 1 pound intake to 350 pounds discharge. The heating box is made from tank gauge steel, with the lid being counterweighted as shown to aid in its being raised.

Positive Vertical Drilling Cuts Costs and Saves Time

Positive vertical drilling, a requirement which originally was considered as adding to the contractor's well expense, is rapidly becoming more widely accepted as beneficial and a means of reducing the drilling time and costs. It requires a study of the conditions in the hole, the redesign of the drill stem, accurate determination of the deviation of the hole, and the selection of proper rotary speeds and bit weight. The advances in straight-hole practices have largely come through a group of contractors who have seen the possibilities through the study of the drilling operation of turning a burden into a blessing.

Fifteen years ago there were many complaints about the holes drilled by rotary rigs and many operators considered it one of the inherent disadvantages of the method. Geological departments were among the first to complain as their interpretations of structural conditions depended to a great extent on the straightness of the holes. In the Seminole field of Oklahoma, on the basis of information secured from samples from rotary wells, the structure was a series of highs and lows, apparently without any rhyme or reason when compared with known structures.

To add to the certainty that something was amiss, wells that were apparently structurally low were completed for good producers while wells situated comparatively high on the structure had passed through the water table. Two possibilities were apparent: either the field was indeed a freak or the information being secured was very inaccurate.

Core Drill Machines Adapted

The core drill machines used to drill prospect holes for finding ore deposits in the northern United States had been using acid bottles for a number of years so this method was adapted to the oil business and a detailed survey was made in the Seminole field. The survey showed that while a few holes were vertical most of the wells in the field had a greater deviation than 10° from the vertical. Some had a deviation as much as 27°.

The loss in footage and the maximum possible horizontal drift is shown for a deviation from vertical from 1° to 10° for each measured 100 ft. of hole* as follows:

Deg. off vertical	Maximum possible drift (ft.)	Loss of depth (ft.)
1	1.75	0.01
2	3.49	0.06
3	5.23	0.14
4	6.98	0.24
5	8.72	0.38
6	10.45	0.55
7	12.19	0.75
8	13.92	0.97
9	15.64	1.23
10	17.36	1.52

Thus a loss of depth of over 66 ft. would be incurred on a well drilled to 4,400 ft. However, the problem is not so simple as the angle of deviation varies irregularly from zero to the maximum depending on the formations encountered and the manner of operation of the drill stem. Diagram A, included here, shows the deflection of the bit as a result of encountering alternating hard and soft formations. The average deviation will give an approximation of the loss of footage when the angle is not large but over 5° the loss of depth increases rapidly. For an accurate determination of the loss of depth a complete record of the deviation at regular intervals is necessary. For an average deviation of 5° the loss of footage on the 4,400-ft. hole would be 16.72 ft., or enough to upset any geologic map drawn on this information.

With the Oklahoma City field looming on the horizon, producing companies began to be more concerned about the straightness of the holes as they wanted the best conditions possible when it came time to install pumping equipment. A maximum deviation of 10° was allowed in the contracts made for wells in the early days of that field's development and this was later reduced to 7° and eventually to 5°. A maximum of 3° is allowed in many fields today although in steeply dipping areas the allowed deviation is 5°. Most contractors confine themselves to a fraction of a degree deviation and a deviation of over a degree is corrected immediately.

*T. P. Sanders, "The Drilling Directory."

Penalties of Crooked Holes

The costs chargeable to crooked holes come under two classes, direct and indirect. The former is easily determined for each job although the expenses directly attributable to crooked holes continues throughout the life of the well and includes premature breakage of the rods, wear on tubing and rods, cost of equipping tubing and rods with guides, loss of production, and damage to the casing which will necessitate extensive repairs. The contractor has the direct costs of plugging back to correct a crooked hole with the loss of the footage already drilled plus the increase in the time required to redrill the hole.

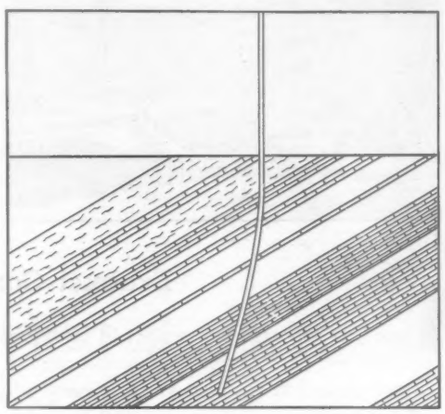


Figure 4

The indirect and hidden costs fall heaviest on the contractor as they affect his equipment, add to his difficulties, and decrease the footage per bit used.

Damage to the drill pipe caused by the con-

Figure 1

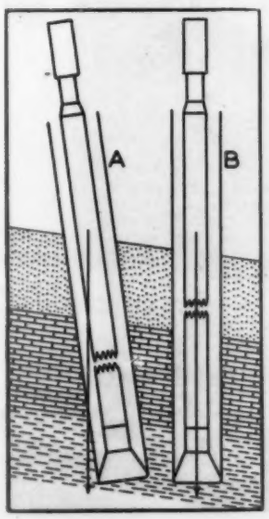


Figure 2

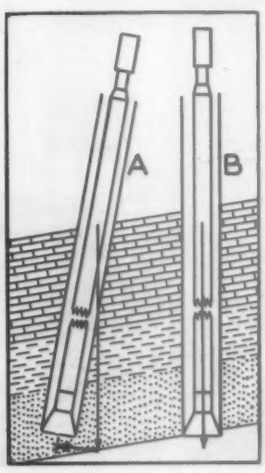


Figure 3

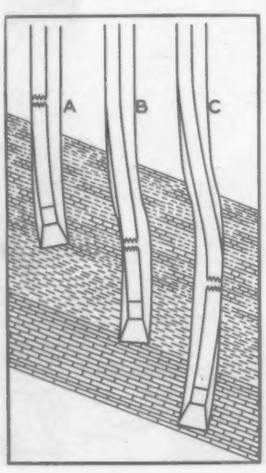


Fig. 1 shows stable and unstable conditions in drill stem. Diagram A shows an unstable drill stem due to the perpendicular from the center of gravity falling outside the base; Diagram B shows a stable condition. It will be noticed that as the center of gravity is raised, the unstable condition may be present although the angle of inclination is small

Fig. 2—Lateral component induced by an unstable condition of the drill stem. As the center of gravity is raised or the angle of inclination increased, the magnitude of the lateral force increases

Fig. 3—Straightening of a hole that is deviating dangerously in A. In B the bit weight has been reduced and the hole is starting to straighten. In C application of weight caused the drill stem to approach the vertical more rapidly. Reduction of the weight at the proper time will allow the hole to assume a vertical course

Fig. 4—Well bore being diverted downdip by alternating hard and soft formations having inclination of 30°

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stant bending while being rotated at high speeds in a crooked hole may not be evident immediately and the only way of computing the costs is by comparing a similar string used on a hole which was controlled vertically. Some indication of the cost of this item is found in the practice of charging off the drill pipe used on directional drilling jobs. As high as 80 per cent is allowed. An immediate effect is seen in the tool joints which show excessive wear due to their rubbing the side of the hole. (The Oil and Gas Journal, May 5, 1939, p. 49.)

The same bending and flexing often causes breakoffs and after a number of these occur there is a distinct lack of confidence in the drill stem on the part of the operator and the drillers. Also the recovery of the fish is more difficult in a crooked hole than in a straight one. Many of these fishing jobs occur after the hole has been straightened and the tendency formerly has been to blame them on other conditions. This is particularly true where there has been a washout of the soft formations immediately under or in the middle of the bend and the top of the fish is allowed to fall one way while the fishing string is forced away from it by the bend in the hole.

A number of strings of stuck pipe can be attributed to key-seating after the straightening of a crooked hole. This is due to the constant contacting of one side of the hole by the drill pipe, the formations being soft enough to be cut away by that medium. On a latter trip the bit will be pulled into this groove instead of going around the bend in the hole.

The modern bits are designed to obtain their maximum efficiency when being used in a vertical hole and as the hole becomes increasingly crooked the efficiency becomes less and less. No mathematical formula has been developed as the loss of efficiency depends greatly on the characteristics of the formation and the equipment in use. It is another case where the evaluation must be made by comparing the number of bits required to drill a straight hole with the number required to drill a crooked hole.

During the past 10 years there has been an informal but effective study of the causes of crooked holes and many remedies have been attempted. The results of this study have indicated to the contractors that the drilling of holes without vertical control is an expensive proposition as far as they are concerned and it is doubtful if the contractors would return to the old method even if the deviation clause were excluded from the contract. They have found that a vertical hole can be drilled as quickly, and often quicker, when the proper equipment is used and operated in accordance with the conditions existing in any particular field.

Factors Affecting the Problem

There are two main factors affecting the problem: geologic conditions and the mechanical design and operation of the equipment used to drill the well. The former cannot be changed but its effects when adverse can be circumvented by altering the second factor.

The greatest amount of drilling is done in fields which generally are structures of the anticlinal type. Over most of the field, a well drilled to the producing formation, will not be in a plane normal to the dip of the formations. In some of the fields, such as the Fox field in Carter County, Oklahoma, the dip may be as much as 30°. As the bit goes from a soft formation into a hard formation it is shoved down dip slightly and as it goes from the hard into the soft formation it will be shoved up dip slightly. When the bit weight and other mechanical factors are not controlled the deviation down dip generally exceeds the up dip deviation and the hole begins to get increasingly crooked as the drilling progresses. (Fig. 1.) By rapid rotation and the application of as little weight as possible (often as little as 1,000 lb.) the tendency of the hole to drift is offset but the increase in the drilling time is prohibitive.

The application of weight to the bit is essential for economical drilling but to do this and maintain the hole vertically requires a study of the stability of the drill stem and its modification as much as possible to make it more suitable to the conditions which it must meet. When all of the weight of the drill stem is hanging from the kelly joint, there should be a vertical line between the bottom of the bit and the rotary table as the entire string is then in tension. With the application of weight to the bit, part of the drill stem ceases to be in tension and becomes a column with a compressive force.

The stability of the column depends on its center of gravity which in turn is dependent on its height in comparison with its diameter. A stable column is one that a plumb line from its center of gravity would fall within its base; an unstable one exists when the same line would fall outside the base.

A study of Fig. 2 will show that as the center of gravity becomes farther from the bottom of the hole, due to more weight being applied to the bit, the less stable the column. It is also evident that as long as the column is maintained vertically it will be stable and the hole will be drilled straight. But as soon as the lower section of the drill stem becomes unstable due to inclination of the drill collar, the tendency of the bit to drift is increased.

Effects of Deviation

A slight deviation of the hole and the consequent inclination of the drill collar introduces a horizontal force (Fig. 3) which increases as the angle of deviation increases and together with the eccentric motion of drill stem causes further deflection of the bit. The same is true of the efficiency of the bit as much of its penetrative force is dissipated in the lateral direction. The same loss of efficiency is noted in the weight applied to the bit, the drilling rate being much slower in a deflected hole than in a vertical hole; the driller knowing that a certain formation should drill at a certain rate applies more weight to the bit in his effort to make it dig with the result the hole is deflected further and the condition aggravated.

By increasing the weight of the drill collar section and thus having less of the drill stem acting as a column and at the same time keeping the center of gravity as low as possible, the ideal condition may be approached. The addition of reamers or guides which center the drill collar in the hole are also an aid. The average drill collar for 6⅝-in. drill pipe weigh close to 250 lb. per foot, and by using a section approaching 100 ft. enough weight will be concentrated in the lower part of the drill stem to make a bit dig into all but the hardest formations.

Some drilling contractors have gone beyond this and have installed drill collars nearly 400 ft. in length which is more than sufficient weight for the operation of the bit, but the additional weight is helpful in that it keeps the upper part of the string in tension while it is being rotated at a high rate of speed, from 350 to 425 r.p.m.

Together with the manner of operation and the redesign of the equipment, accurate and detailed knowledge of the deviation of the hole is necessary at all times. This is obtained by the use of one of the devices which records the inclination of the hole at a point just above the drill collar. It would be desirable in many cases to obtain a reading at the bit but due to the presence of the float valve, which is at its lowest possible position when it is on the top of the drill collar, it is impossible to do so.

There are four general types of instruments for taking deviation tests. The oldest is probably the acid bottle, which is merely a bottle filled with dilute hydrofluoric acid run into the pipe in a case attached to a wire line and allowed to set about 5 minutes, at the end of which time a line normal to the inclination of the pipe will be etched on the bottle.

Additional Devices Used

Another device uses the fluid cycling of ink through several chambers, one of which contains a chart which likewise indicates the normal to the inclination. The upper chamber is filled with ink and the instrument lowered into the hole to the desired depth on a wire line. An orifice of suitable size connects the upper chamber with the recording chamber and after the instrument is on bottom a few minutes the maximum fluid level is reached in the recording chamber and the fluid begins to enter the bottom chamber.

A third device consists of an angle indicator which maintains a perpendicular position and the upper end is equipped with a needle point. A graduated chart attached to the timing mechanism is located immediately above it. After setting the timing device the instrument is run into the pipe on a wire line or it is dropped into the pipe and stopped just above the float valve by a baffle plate. As soon as the time expires, the timing mechanism releases a spring that punches the chart against the angle recording needle.

A fourth type of instrument photographs the position of an angle recorder or plumb bob combined with a compass at a predetermined time regulated by the timing mechanism. When run in the open hole this instrument will also show the direction of the deflection as well as the amount. It is frequently used for directional drilling purposes.

Much of the benefit to be gained from the use of straight-hole recording instruments is dependent upon the frequency with which the readings are obtained and the accuracy with which they are read or are possible to read. The information obtained should be instantly available to the driller as it will determine his course of action and dictate the bit selection and the amount of weight to be run.

In strange areas, such as a wildcat or new field, a reading every 100 ft. would not be too often. As information is gained on the area it might be safe to decrease the number of readings to one every 500 ft. with tests at selected points immediately under formations that may particularly affect the deviation. On the other hand it might be well to increase the number of readings in areas where the dipping formations are causing crooked holes.

The accuracy and consistency of the instrument and the record it provides is also important as the tendency of the hole to deviate or straighten can be thus noted instantly and the maximum bit weights determined. If the deviation is zero at one depth and shows one-half a degree for the next succeeding test and 1° for the following test, it is obvious to the drillers that corrective measures are in order and should be started at once.

As long as the elements of instability, eccentric rotation and lateral bit forces are not firmly established, straightening of the hole is not difficult, requiring generally the running of less weight until the bit begins to return to a vertical course.

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Beyond this "critical angle" the straightening of the hole becomes more difficult. The size of hole, the center of gravity, size of the drill pipe and drill collars, position of the reamers, and other factors determine the magnitude of the critical angle, which is generally a fraction of a degree. Keeping the hole straight is the more economical, as the drilling efficiency is at a maximum and any tendency to deviate should be corrected at once to maintain maximum cutting rate of the bit.

A hole that is just starting to deviate can be straightened by reducing the weight a few points and increasing the speed of the rotary table. The next vertical record may show a decrease in deviation and the former weight may be resumed. Experience will dictate the use of weight and correlation of bit weight with the geologic formations is useful.

If the deviation of the hole has been definitely established there are several courses open to the drilling crew. When the hole has deviated beyond the maximum allowed in the contract, plugging back may be required. Other methods include the running of a directional whipstock or the enlarging of the bottom section with a well scraper which will allow the drill collar to assume a more vertical position.

The cheapest, and the one most commonly used, is to reduce the weight on the bit to about 500 lb. and increase the speed of rotation. The cutting rate of the bit will be reduced, but due to its pressing against the low side of the hole, it will also have a lateral effect and as the drilling progresses the angle of deviation will be lessened. As soon as the deviation records show a decrease and some hole has been made, it is possible by the application of weight to force the bit back towards vertical. As the bit approaches the vertical the weight will need to be reduced so the drill stem can establish a true vertical course.

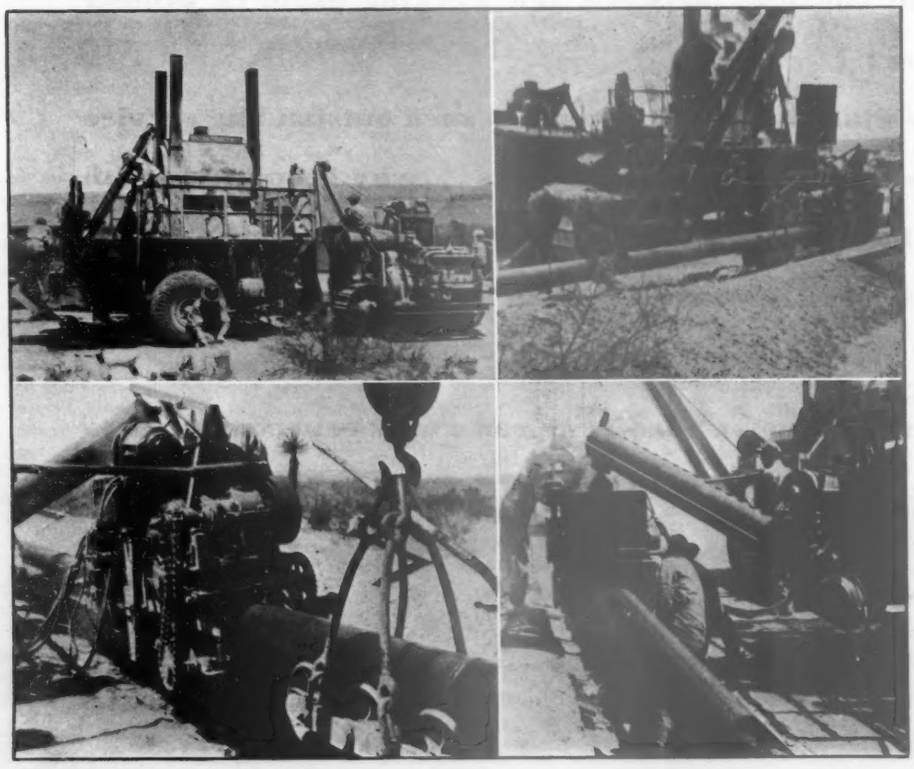
In addition to an efficient and accurate deviation recording instrument, the driller needs an accurate weight indicator instrument. If it does not have a recording chart, the driller should be required to keep an accurate record of the weight used during his tour, as it may be desirable to correlate the bit weight with the deviation record at some future time.

Equipment Used in Coating Pasotex Pipe Line Section

For the recently completed reconditioning of 25 miles of 8⅝-in. line of Pasotex Pipe Line Co. near El Paso, Tex., coating equipment used was designed, constructed, and assembled by the contractor, Industrial Engineering Co., Los Angeles, Calif. In doing this job, the line was uncovered, raised on skids over the trench, cleaned by cleaning machine, sand blasted, and spot welded; a priming coat was applied before putting on a Somastic coating ½-in. thick. The coating was tested with a holiday detector before lowering and back filling. During the entire operation the line was in continuous service of pumping oil at 75° F. at 450 lb. pressure; atmospheric temperature was between 80° and 110° F.

The line on which these operations was carried on extends for 65 miles from the company's El Paso refinery to the Hueco pump station east of the city. Previously, parts of the line had been coated with asphalt protected by a triple wrapping. The field work of applying the coating to the 25-mile section began April 1 and was completed the latter part of May. With the equipment used, coating is applied by an extrusion type nozzle; the mixing and heating plant is pulled along the right of way by a tractor with a slow-speed transmission suitable for this service. The tractor is equipped with a boom from which is suspended a pipe dolly that cradles the pipe. A coating unit rides on the pipe. On the side of the tractor opposite the pipe is a 30-k.w.d. motor-driven generator; the generator furnishes current for motors and electric heating elements. Coating materials are prepared for application in a mixing unit mounted on the trailer pulled by the tractor.

A central electric control board is mounted on the operator's platform of the mixing unit; an auxiliary push button control at the nozzle makes it possible to synchronize travel speed with the speed of the motors of the mixing unit.



Materials Used in Coating

Materials used in making this type of coating are graded sand, lime dust, asbestos fiber, and air-blown asphalt. Most of these materials used in the Pasotex job were procured in the locality where the work was done. The sand was screened, weighed, and sacked at a nearby pit and distributed along the right of way with other materials. These materials were dumped into a skip on the mixing unit. In a plant of this kind sand is dumped into the rotary drum where it is heated to 480° F. Asphalt is heated in an insulated field kettle on the unit; it is circulated to the mixing chamber by pump; batches are dumped into the pug mills where materials are thoroughly mixed and brought up to the proper temperature for coating. The unit is equipped with two pug mills which make it possible to use one for mixing while a batch of mastic is drawn from the other.

Screw conveyors carry the mastic from the pug mill to the hopper on the coating nozzle. Conveyors are heated so that temperature of the mastic is maintained at proper coating temperature of approximately 350° F. From the hopper the material passes into a motor-driven pump which forces the mastic under pressure into the nozzle through which the pipe is passing. The nozzle is constructed so as to provide for expansion necessary to accommodate patches or couplings on the line. The nozzle may be adjusted to provide a uniform coating thickness over raised portions. Following the coating operation, the line was inspected for holidays by using a high voltage detector capable of throwing a spark 1-in. long.

Counting Strokes on Pump

The determination of the mud-pressure is a vital factor in safe drilling for two reasons, a drop in pressure either indicating a hole in the pipe or by-passing of the fluid between the pistons and cylinders. In the former case the driller will want to come out of the hole immediately and in the latter case he can pull up off bottom a safe distance and repair the pump. However, the loss in pressure is sometimes due to a defect in either the pump gage or the gage diaphragm.

In areas where the hole caves badly and there is any danger of plugging the bit it is useful to count the strokes of the pump as the pump should be slowed down and pressure applied slowly until it is evident that circulation may be gained. When displacing acid of live oil in an attempt to free a stuck bit, the size of the pump liners and pipe will determine the amount of fluid moved per stroke of the pump. Counting the pump strokes is then essential.

Progress in METALS

By W. L. NELSON

Effect of Hydrogen on Steels

Abstract—Paper in French by L. Jacque in Chimie et Industrie, Vol. 40, Nov. 1938, pp. 850-862. Translation taken from Metals and Alloys, May 1939.

The problem of decarburization and general alteration of steels and the inpairment of their mechanical properties by the action of hydrogen arises in the synthetic ammonia industry and in the hydrogenation of solid and liquid fuels. Temperatures of 500° to 600° C. and pressures of 1,000 to 5,000 lb. per sq. in. and higher occur. The alteration by hot hydrogen extends to a great number of ordinary and special steels, the rate of attack varying widely with the composition and increasing with the pressure and temperature. Generally the change is particularly noticeable in hyper-eutectoid steels. The mechanism of the phenomenon is comparable to cementation at rather low temperature, in the reverse direction. Local corrosion may create abnormal stress distribution in the surface, which is favorable to failure. Various special steels with pearlitic structure also show a similar behavior. Semihard 2 to 3 per cent nickel steels, containing no chromium or only a small percentage (1 per cent), are extremely sensitive to decarburization. Some improvement may be achieved by previously tempering around 850° to 870° C. Superficial scratches form points of attack, since local separation of the crystals facilitates the penetration of hydrogen. The altered zones of the steel are not only deprived of iron carbide but also show a network of fissures that is the more pronounced the higher the carbon content of the metal. These two effects penetrate gradually and replace each other, frequently following a common front parallel to the surface. It seems well established that below 200° C. (392° F.), hydrogen under several hundred atmospheres pressure produces no alteration in ordinary mild or semihard steel. Alloy steels belonging to the group of semihard steels and containing about 1 per cent chromium show a somewhat higher limit of attack but cannot be used at temperatures above 350° or 400° C. (752° F.). High strength steels with higher chromium content (5 to 7 per cent) and with less carbon have an improved resistance, which may be satisfactory in many cases. Generally the mechanical resistance of steels exposed to hydrogen attack decreases more rapidly for high carbon steels. Whereas, the altered steels show almost total absence of elongation, chromium-molybdenum steels stay practically unchanged; the elongation is slightly increased which indicates that some annealing took place. Nickel accelerates decarburization. Three to six per cent chromium steels exposed to 150-atm. pressure of hydrogen at 500° C. did not suffer any change in weight. The steels subject to attack show considerable swelling and their surface turns bright.

High-Speed Steel

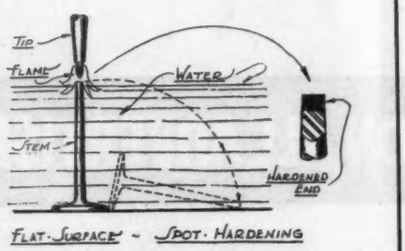
A alloy steel used for cutting or forming metals and characterized by the development of high hardness by heat treatment and the ability to retain in a large measure this hardness at red heat. The principal alloying elements are tungsten, chromium, vanadium, molybdenum, and cobalt. High-speed steels are made by electric furnace process.

Taken from A.P.I. Code No. 28.

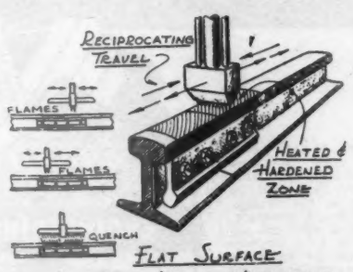
Mechanics of Flame Hardening

Although flame hardening has not yet been adopted widely in the manufacture of drilling and producing equipment for the oil industry, the method is being applied to such equipment as catheads, cable sheaves, sprockets, ball races, tool joints, swing joints, and plug valves. Doubtless, the method will be adopted much more widely in the future—and hence, the charts shown, taken from a paper presented by Stephen Smith of the Air Reduction Sales Co., before the American Society for Metals in Cincinnati and also Rochester during April, are presented as a guide to manufacturers in the fabrication of the many shapes of equipment that are required by the oil industry. Flame hardening may be defined as the operation of heating the surface of a ferrous material by means of the oxy-acetylene flame to such a temperature that subsequent quenching by water or compressed air will result in a surface that is hard and wear-resistant.

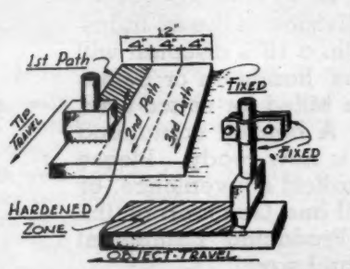
The primary advantages of flame hardening are: (1) The equipment is inexpensive and portable; (2) the time required is short; (3) distortion is avoided to a large extent, and (4) the costs of machining and grinding are reduced. The sketches indicate the general methods of conducting flame hardening and it is hoped that the figures will suggest similar applications in the oil industry. There is no doubt but that hardness and wear resistance are of primary importance in many phases of drilling and production, and hence flame hardening will become increasingly useful because it improves hardness and wear-resistance without sacrificing strength or shock resistance within the main body of material.



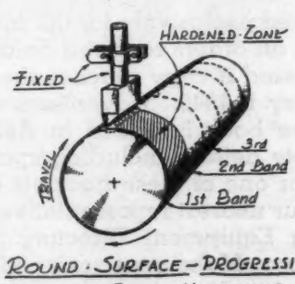
FLAT-SURFACE ~ SPOT-HARDENING
TORCH STATIONARY



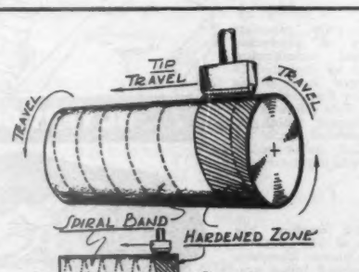
FLAT SURFACE
UNIT-AREA · HARDENING
TORCH IN MOTION



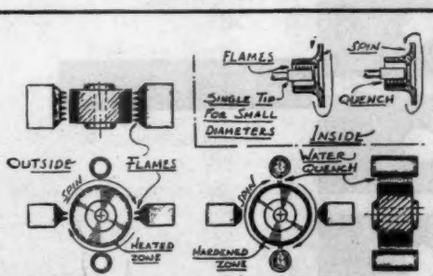
FLAT SURFACE ~ PROGRESSIVE-HARDENING



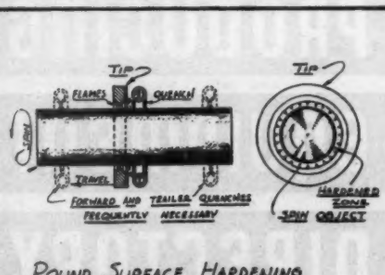
ROUND-SURFACE—PROGRESSIVE
CIRCULAR-BAND HARDENING



ROUND-SURFACE ~ PROGRESSIVE
SPIRAL BAND HARDENING



#1 - HEATING OPERATION #2 - QUENCHING OPERATION
ROUND SURFACE HARDENING
SPINNING



ROUND SURFACE HARDENING
PROGRESSIVE SPINNING
OUTSIDE

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SAFETY — Ladder on Top of Derrick

Crown blocks are not left on many derricks in the Oklahoma City field, and some of these wells demand frequent repair jobs. This requires that a crown block be "landed" each time the crew arrives to pull the rods and tubing.

In the early days of the field an old-style pumping crown was generally left on the derrick and a safety line strung over it so equipment could be handled in case of fire. When attempts were made to use these for cleaning-out operations, it was found that they were inadequate. This led to the adoption of heavier and more expensive crown blocks.

Landing of the crown block requires that a man climb the gin pole and install a snatch block through which the winch line is run. The snatch

block sometimes weighs as much as 30 lb., and it requires considerable strength and acrobatic skill to perform this task.

There is a constant danger of falling due to a severe gust of wind or the loosening of one's grip. The gin poles on most derricks have only one brace about midway, and this makes it difficult to obtain a safe and effective working position.

One company has installed ladders made from angle irons on their gin poles. This makes it possible for one man to climb the derrick and install the snatch block. In many cases a ¾-in. rope is used to pull the winch line into position instead of having the men carry the heavy line to the top. The worker is not only safer from danger of falling, but he also can perform his task more quickly. The saving in time alone pays for the installation of the safety ladder.

The recommended method of hanging the tubing board is also illustrated in the photograph. The boards are fastened to steel straps which hinge on a pipe resting on the girts and tied to the derrick legs. When not in use the board hangs so it is least exposed to the weather; when needed it is easily put into the horizontal position. This board also has steel fingers that make the derrick man's work much easier and safer.

German Synthetic Fuel

Synthetic fuel for high-speed Diesel engines is now being produced in Germany on a commercial scale, according to a recent report to the Department of Commerce from the American consulate general, Frankfort-on-Main.

The process uses as raw material a mixture of tar oils produced in the coking of bituminous coal and so-called "KogasinII," a material produced from gasified coke, or carbon monoxide and hydrogen.

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Reverse Circulation Using OIL For Circulating Medium
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Washing Tool in Action

Two wells were drilled on the same lease in the middle of the East Texas field; one a 6¼" hole by conventional Rotary equipment; the other, a 4¾" hole by the "Beckman Process."

Both were 3,500 ft. wells; the formation logged identically. Bottom-hole pressure test on these two wells, both "closed in" and on "open flow" checked within one pound of each other.

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Exothermic Reac Requirements

By J. P. O'DONNELL

With the octane numbers of regular and premium motor fuels on the ascent, refiners of Pennsylvania Grade crude oil are again faced with the problem of improving the quality of their product to further improve their position in the market. Processing a highly paraffinic crude with its comparatively small proportion of low boiling point fractions, including a straightrun gasoline of 48-52 octane, the motor fuel problem of these refiners is one of major magnitude. Through adoption of improved methods of cracking and reforming, some of them have avoided the always-difficult task of disposing profitably of their low-octane straightrun gasoline. However, the persistent improvement in the octane rating of competitive motor fuels has again brought them face to face with the problem of improving their product or relinquishing their market.

This problem is being met with complete success by four Pennsylvania refineries, co-owners for the past 8 years in a cooperative cracking plant to which they recently added a U.O.P. nonselective catalytic polymerization plant. These companies are the Pennzoil Co., which has the majority interest in the new unit; the James B. Berry Sons' Co., Inc., a subsidiary of the Quaker State Oil Refining Corp.; the Wolverine-Empire Refining Co., and the Continental Refining Co., among the latter three of which a minority interest is divided. All these companies are in or near Oil City, Pa., and the plant is located at nearby McClintockville. It is located on the property of the Pennzoil Co., and the operations are in charge of Pennzoil engineers. All incidental accounting is done in the Pennzoil Co. offices.

Motor-Fuel Yield Upped 3 Per Cent

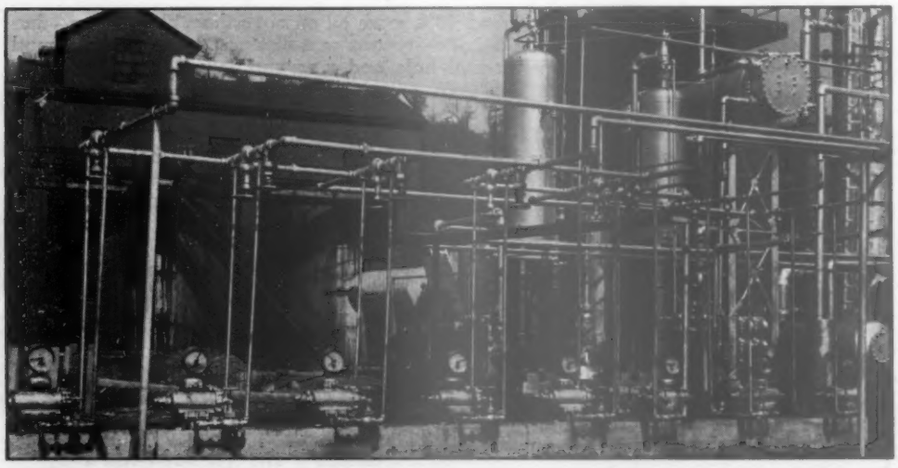
The addition of the new unit has increased the motor fuel yield of the cooperative plant 3 per cent and is providing the participating companies with 250 bbl. per day of 86-88 octane material for blending. The blending value of the polymer gasoline, varying with the quality of the base stock, has exceeded expectations as did the octane value of the polymer gasoline itself. Finished 10-lb. Reid vapor pressure motor fuel, a blend of cracked and polymer gasoline or reformed and polymer gasoline, has an octane rating of 69, by the L-3 method, an increase of 1.5 over the previous finished product of the plant.

Initial catalyst yields on the plant were 75.5 gal. per lb. This was attained in what may be termed a "shakedown" run, and while relatively high for polymerization plants now in operation, will be greatly exceeded by subsequent yields. The 75.5-gal. per lb. yield was obtained on the initial catalyst charge in the first reactor of the series. The second reactor has already attained a yield of 122 gal. per lb. and ultimate yields well above this figure are believed to be attainable in this plant, due to the high olefinic content of the charge.

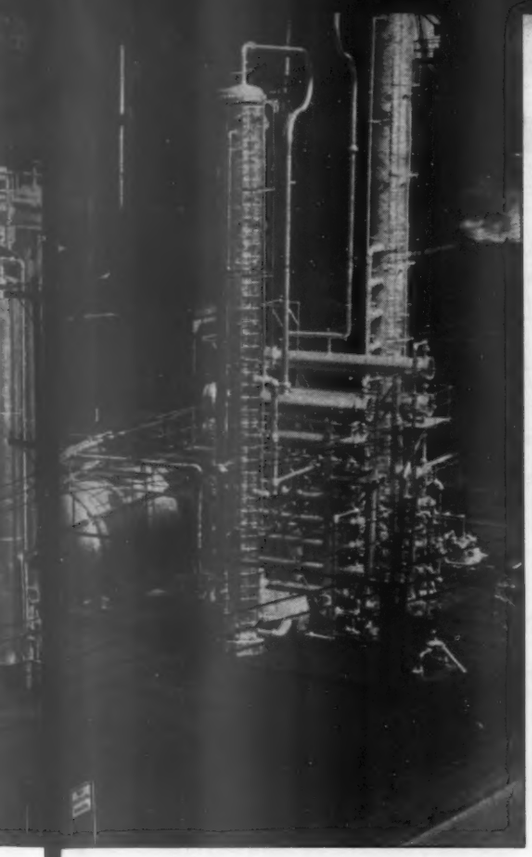
During its first sustained run the plant had a total charge of 26,796 bbl. of liquefied stabilizer gases. Its products for the run were as follows: 10,119 bbl. of polymer gasoline or 30.3 per cent of the charge; 2,931 bbl. of butane or 10.9 per cent of the charge; 11,620 bbl. of polymer stabilizer gases or 43.4 per cent of the charge, and 2,126 bbl. loss and shrinkage, 7.9 per cent of the charge. The polymer gasoline has an initial boiling point of 96° F. and an endpoint of 420° F.

This unit differs from catalytic polymerization units previously described in trade literature inasmuch as no supplementary heater or furnace is employed. The necessary increase in temperature for the charging stock is obtained entirely by exchange with polymer gasoline leaving the reactors and by a steam preheater supplied from the top of the reactor cooling jackets. This feature not only reduces installation and operation costs but also permits the use of gases from the polymer stabilizer, which ordinarily are used as fuel for the unit, as fuel elsewhere. The use of a compressor is also obviated in this unit by the utilization of sufficient condenser surface and the maintenance of a high-enough pressure on the reformer and cracking plant stabilizers to condense all gases.

The polymerization unit is charged with approximately 1,500 gal. per hour of liquid condensed from overhead gases of three stabilizers.



Top of page: View of cooperative plant showing polymerization unit's reactors and stabilizer at the left and other stabilizers and absorber in th foreground. Lft: Battery of meters for gaging charge from various sources and product



naphtha or straightrun gasoline. In these stabilizers, all of which are held under a pressure of 200 lb. per sq. in., the cracked and reformed gasoline is stabilized to 6 lb. Reid vapor pressure in order to obtain all the butylenes and isobutylenes possible for polymerization. The percentage of higher olefins in the cracking plant gases averages 40.6 per cent and in the reforming unit gases 45.3 per cent, and in the combined charge to the unit 41.9 per cent. Approximately 1.9 per cent of the higher olefins are taken off in the butane sidecut and 2.7 per cent in the polymer stabilizer release gases with the remainder, or 95.4 per cent, going out as polymer gasoline and shrinkage.

The polymerization unit feed originates in the reformer and cracking plant stabilizers, gases from which pass through condensers to reflux tanks. The reflux tanks provide coolant to the top of the stabilizers and also supply a given amount of liquefied gases to the polymerization unit's charge surge drum. The surge drum, held under a pressure of 200 lb. per sq. in. at 100° F., is equalized back to the reflux tanks. The polymer charge from each of the stabilizers is metered individually before entering the surge tank so that an accurate division of the charge among the participating companies can be made.

A centrifugal pump picks up the charge at the surge tank and delivers it, through a fourth meter which gages the entire charge, to the water wash where fresh water to stimulate the polymerization reaction is pumped in through Duriron mixing nozzles. The pump which picks up the charge at the surge tank has a discharge pressure of 300 lb. per sq. in. After metering and mixing with water, the charge goes to the settling drum where excess water is drained off through a float control arrangement. The settling drum is held under a pressure of 280 lb. per sq. in.

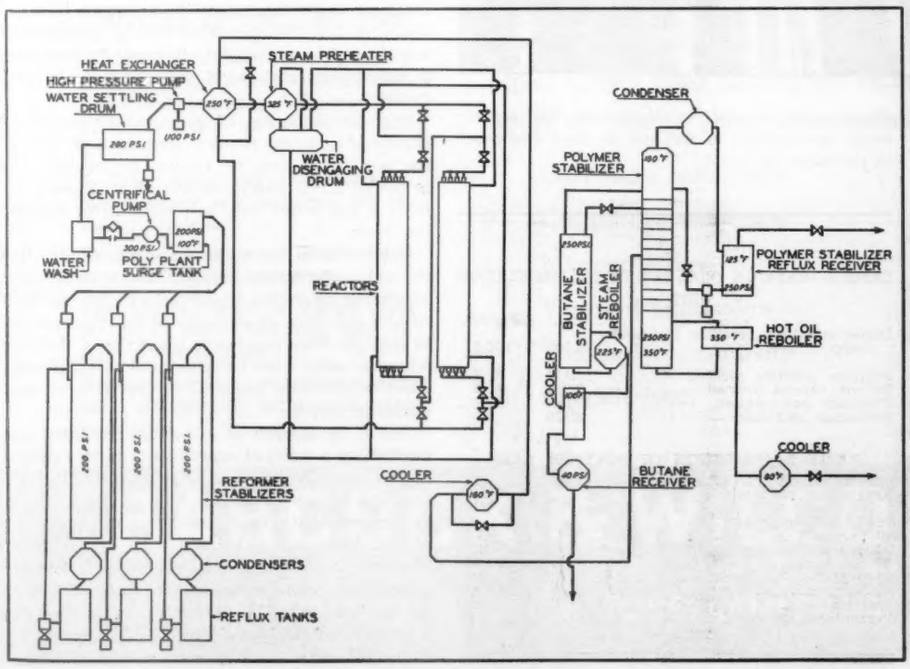
Feed Pumps

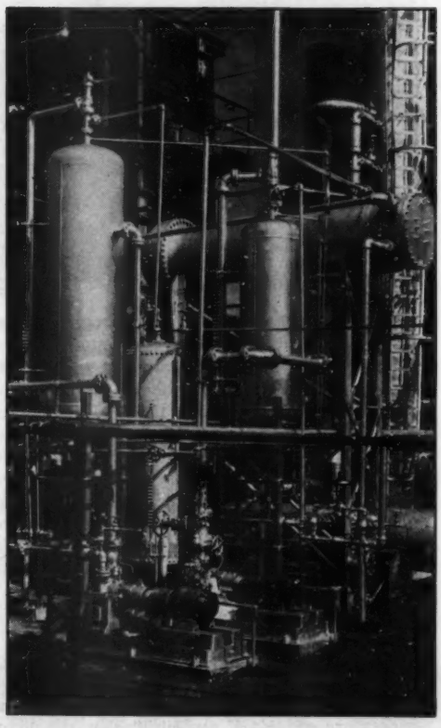
The water-free charge from the settler is picked up by a National Transit vertical, triplex, close-clearance pump with a discharge pressure of 1,100 lb. per sq. in. The pump is driven by a Louis Allis explosion-proof motor of variable speed governed by a Clark slip-ring control to take varying amounts of feed. The temperature of the charge is raised to 250° F. through heat exchange with reacted products and to 325° F. in the steam preheater before admission to the first reactor which it enters at a pressure of 1,100 lb. per sq. in.

The feed passes through the two reactors in series. It picks up about 50° F. in temperature in passing through the first reactor which it leaves at 375° F. and a similar amount in the second which it leaves at 425° F. The pressure drops slightly in reaction, the drop in the first reactor amounting to about 80 lb. Each bank of reactors contains sixteen 6-in. tubes enclosed in 8-in. cooling jackets, 24 ft. in length. The 16 tubes in each bank operate in parallel and the two banks in series. Water in the jackets is kept under a

tions Supply Entire Heat for Poly Units

Two of these stabilizers, operating in parallel, serve the recently enlarged cracking plant, now being charged with gas oil and naphtha, and the third serves the reformer, normally operating on

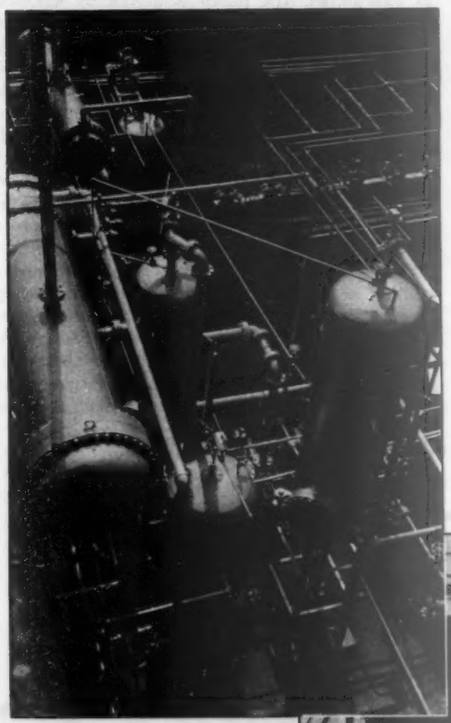


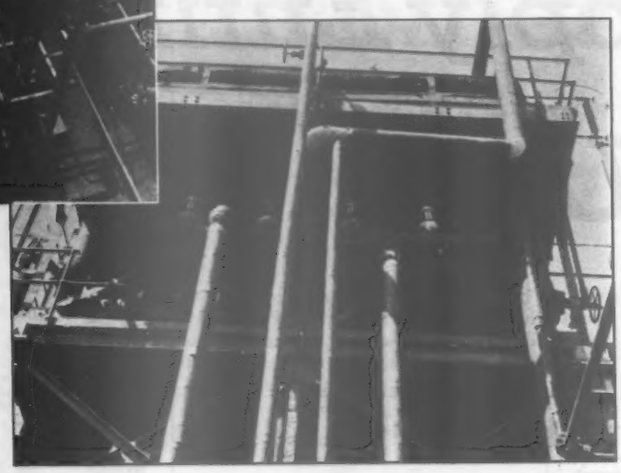


Above: Surge tank, coolers, pumps, etc., of polymerization unit. Left: Simplified flow chart of cooperative polymerization unit operated jointly by four western Pennsylvania refiners

pressure of about 400 lb. per sq. in. to insure a supply of steam for the preheater. Condensed steam from the preheater flows by gravity to the water storage drum which is set at the same level as the top of the reactors in order to maintain the water level in the reactor cooling jackets. The reactors are so arranged that either may be used first.

From the reactors the product passes through the heat exchanger where its temperature is reduced to approximately 275° F. in providing heat for the feed. This exchanger is equipped with a bypass to allow for the discharge of more product than is needed to provide the desired temperature for the feed. From the heat exchanger the product is carried to a cooler, where the temperature is further reduced to 160° F., and thence to the polymer stabilizer. This stabilizer operates under a pressure of 250 lb. per sq. in., with a top temperature of 160° F. and a bottom temperature of 350° F. The reacted product enters about the middle of the 24-tray tower which has an inside diameter of 36 in. and a height of 45 ft.





Above: Looking down on polymerization equipment from top of reactors. Right: Looking up at valve assembly at top of reactors

Gasoline Is Stabilized

Here the gasoline is stabilized to 10 lb. Reid vapor pressure and the polymer is taken off the bottom. It enters a hot oil reboiler, held at a temperature of 350° F., which flashes the light products back into the stabilizer. Polymer gasoline from the reboiler passes through a cooler where the temperature is reduced to 80° F. and thence through meters to be blended with products of the reformer and cracking unit.

Another distinctive feature of this plant is the manner in which the butane sidecut taken from the polymer stabilizer is handled. This sidecut is taken off from the third tray above the feed inlet to the stabilizer in order to prevent the inclusion of any higher boiling point polymer and delivered to a smaller stabilizer packed with carbon raschig rings and held under a pressure of 250 lb. per sq. in. The butane stabilizer is 18 in. in inside diameter and 14 ft. in length. After passing down through its stabilizer, the butane is delivered to a steam reboiler where a temperature of 225° F. is maintained. Here the butane is taken off the bottom and propane and other light ends are returned to the butane column and pass, through a vapor return line, to the polymer stabilizer which they enter at a point above that at which the sidecut was taken. From the reboiler the butane passes through a cooler where the temperature is reduced to 100° F. at which it enters the receiving drum held under 40 lb. per sq. in. pressure. The butane is divided between the reformed and cracked products to increase the vapor pressure to the desired 10 lb. The efficiency of this method is shown by the fact that the propane content of the butane cut never exceeds 3 per cent and is normally about 1.5 per cent.

250-Lb. Pressure Maintained

Some of the overhead gases from the polymer stabilizer are condensed and delivered to a receiver where a temperature of 125° F. and a pressure of 250 lb. per sq. in. are maintained. A reflux for the stabilizer is taken from the receiver while the balance of the gas is used elsewhere in the plant as fuel.

TABLE 1—DATA ON TRIAL RUN OF POLYMERIZATION UNIT

	Bbl.	Per cent
Dubbs stabilizer pressure distillate charge	26,796	100.0
Polymer gasoline yielded	10,119	37.8
Butane sidecut yielded	2,931	10.9
Stabilizer gas yielded	11,620	43.4
Shrinkage and loss	2,126	7.9

TABLE 2—INSPECTION OF POLYMER YIELD

Gravity, A.P.I.	65.7
Reid vapor pressure	9.7
	(°F.)
Initial boiling point	96
10 per cent	142
30 per cent	204
50 per cent	230
70 per cent	266
90 per cent	359
Endpoint	420
Percentage recovered	94

Large Acid Treatment Given Pure Oil Co. Well

The largest acid treatment of a lime well was given the Pure Oil Co. No. 1 Noble, C NE SE of Section 35-3s-1e, Carter County, Oklahoma. Twenty-five thousand gallons of acid was pumped into the well, bottomed in the Arbuckle lime at a total depth of 8,485 ft.

The entire amount of acid was pumped into the hole in a single operation. In preparation for the job, the acid was hauled from the distributing station in Seminole, Okla., a day and a night being required to transport it to the well.

The average well is treated with approximately 3,000 gal., the amount of the treatment varying with the locality. In West Texas the average is 5,000 gal., while in the Texas Panhandle amounts varying from 8,000 to 10,000 gal. are used. In Illinois the treatments range from 4,000 to 6,000 gal., while in Michigan the trend is toward lighter treatments ranging from 150 to 500 gal. These wells are often given several treatments, the amount generally being increased with each successive acidizing.

A total of 15,000 gal. was often used in the early days of the Fitts pool, but the amount was divided, 5,000 gal. being injected in the first attempt and 10,000 gal. added later. In 1935 a well in the Oxford, Kansas, pool was treated with 25,000 gal., but this too was divided into quantities of 10,000 and 15,000 gal.

At the present price of acid, 14 cents per gallon, the cost of the treatment on the No. 1 Noble cost the Pure Oil Co. $3,500.

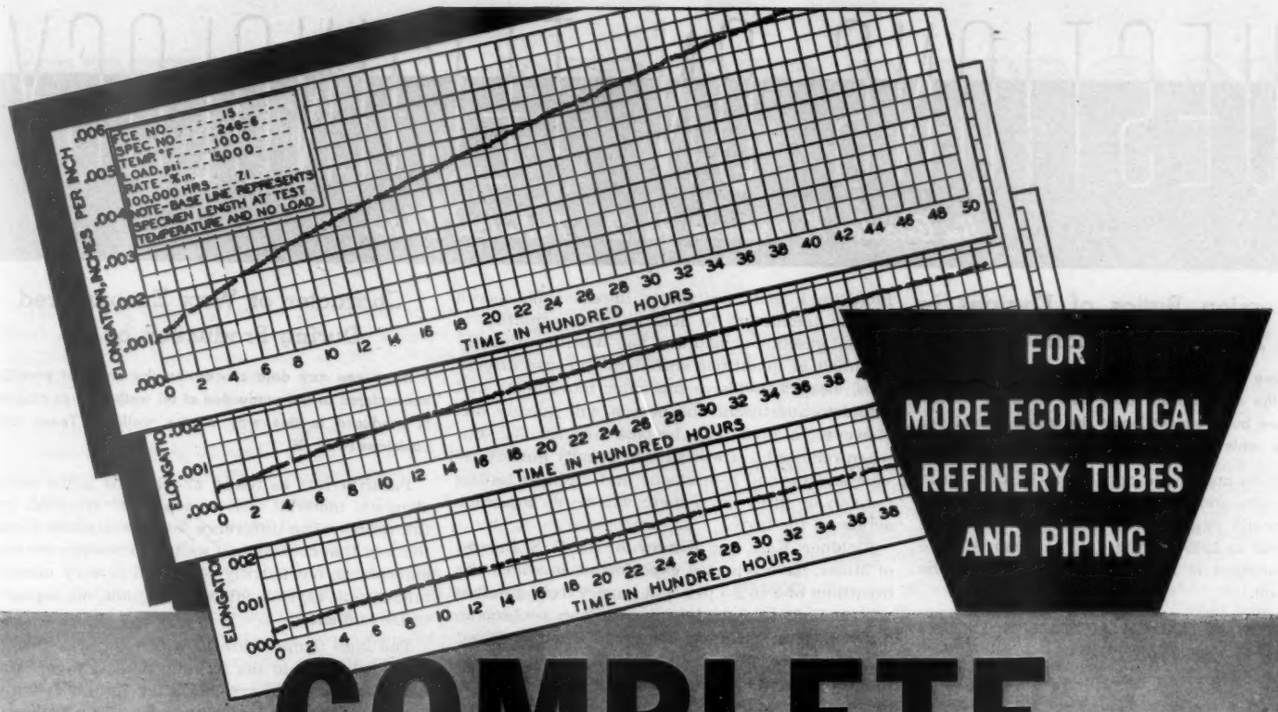
Unit of Permeability Is Defined

The unit of permeability has been tentatively defined by the American Petroleum Institute as "the rate of flow, in milliliters per second, of a fluid of 1 centipoise viscosity through a cross section of 1 sq. cm. of porous medium, under a pressure gradient of 1 atm. (76.0 cm. Hg) per centimeter and conditions of viscous flow." This unit is called the "darcy" and has been commonly accepted in the petroleum and natural-gas industries. The units used in the calculation of permeability of porous media in terms of darcys are not consistent dimensionally but have been selected so that the calculated unit of permeability would not be so large that it would be necessary to report permeabilities of reservoir rocks in small decimals.

The determination of permeability coefficient expressed in darcys requires that the flow through the porous medium be viscous or straight line, as the flow relationship expressed by Darcy's formula is applicable only to conditions of straight-line flow.

Experiments have shown that fluids flow through a given tube in one of two definite ways, depending upon the linear velocity of the flow. At low velocities all particles of the fluid proceed in straight lines parallel to the walls of the tube, whereas under high velocities the forward movement of the fluid proceeds in the form of small eddies or swirls.

The U. S. Bureau of Mines has recently been conducting a series of experiments on this subject. It has recently issued a pamphlet which shows that the factors governing flow of gases may be expressed quantitatively by means of general empirical formulas, which over the range of the observed experimental data are for practical purposes independent of the type of flow. It is Technical Paper 592, "Flow of Air and Natural Gas Through Porous Media," by T. W. Johnson and D. B. Taliaferro.



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QUESTIONS ON TECHNOLOGY

By Charles K. Francis, Ph. D., Technical Editor

Compression Ratios of Engines in Leading Automobiles

Some time ago The Oil and Gas Journal published a list of the compression ratios now used in automobile engines but I cannot locate the article. Could you supply the table showing this information?—L. E.

The article mentioned appears to be the one in which it was shown how the compression ratios of automobile engines had increased during the period 1932 to 1939. In the data reproduced here the information is for the latest models of the 1939 season.

COMPRESSION RATIOS OF AUTOMOBILE ENGINES
YEAR 1939

Car—	Compression ratio
Buick 60	6.25
Cadillac V-8, 75	6.70
Chevrolet, Master 6	6.25
Chrysler 6	6.50
Dodge 6	6.50
De Soto	6.50
Ford V-8, 60	6.60
Ford V-8, 85	6.15
Hudson 6, 8	6.25
Hupmobile 6	5.75
Nash 8	6.00
Oldsmobile 8	6.20
Packard 6	6.52
Packard Super 8	6.45
Plymouth	6.70
Pontiac 6, 8	6.20
Studebaker, President 8	6.00

Reference: W. T. Ziegenhain, The Oil and Gas Journal, Dec. 1, 1938, page 19.

Petroleum Hydrocarbons Are Simple Asphyxiants and Intoxicants

May I request information concerning American studies on acute or chronic intoxications following the breathing of the vapors from crude oil and gasoline or other light hydrocarbons?—E. H. S.

The volatile hydrocarbon mixtures derived from petroleum and natural gas are recognized as simple asphyxiants when taken into the human system. They cannot be considered as toxic because they are nonreactive, being eliminated from the body in the same condition in which they were absorbed. They act because they exclude oxygen from the lungs. The petroleum hydrocarbons are those of the paraffin series and are not encountered in the industry singly, but are invariably mixtures. Some natural gas is almost pure methane and this compound is the fire damp found in coal mines.

It is only the mixtures of the lower hydrocarbons from methane to and including pentane that may be present, because the higher members are not volatile at normal temperatures. Pentane boils at 36.2° C. (97° F.), and the next higher hydrocarbon is hexane, boiling at 69° C. (156° F.). So but little hexane could be present in the gas mixtures commonly encountered.

The literature gives no instance of chronic intoxication from breathing mixtures of the paraffin hydrocarbons. There have been many reports of men intentionally breathing natural gas, vapors from oil, natural gasoline and the lighter distillates in refineries for the intoxicating effects, producing an excitement similar to alcoholic intoxication, including hilarity, irritability, unreasonable speech and an inclination to quarrel. This condition is termed gasoline or naphtha jag. When continually breathed in quantities sufficient to cause drowsiness, sleep, convulsive muscular movements and complete anesthesia, the person will quickly die. However, a man may become unconscious, but when removed to fresh air will usually quickly revive and beyond a headache and dullness lasting for two or three days, there will be no injurious action on the body.

Fieldner, Katz, and Kinney, of the U. S. Bureau of Mines, have reported experiments in which the breathing of 2 to 2.5 per cent vapors from gasoline was enough to quickly cause a man to become dizzy. Sayers, Fieldner, Yant and Thomas found that exposure of men to gasoline vapor showed that 0.1 per cent caused mild symptoms of dullness, unsteadiness, and giddiness in 50 minutes; 0.3 per cent caused slight irritation of the eyes, and moderate symptoms of dizziness in 30 minutes; and 0.7 per cent caused coughing, marked irritation of the eyes and nose, numbness in legs and unsteadiness in 10 minutes.

Natural gas and petroleum containing hydrogen sulfide belong in the toxic class. Hydrogen sulfide is an irritant poison, causing death as rapidly as the most powerful of the poisons; a man inhaling a high concentration does not observe any odor and suddenly drops dead. Fortunately there are few oil fields producing oil or gas containing large percentages of hydrogen sulfide. The best known fields of this kind are the Panhandle of Texas, Mexico, Lima, Ohio, and Canada.

References: J. L. Risinger, Suggested Means for Detecting Harmful Gases, The Oil and Gas Journal, February 9, 1933, p. 14. Henderson & Haggard, Noxious Gases, 1927. Sayers, Fieldner, Yant & Thomas, Experimental Studies on The Effect of Ethyl Gasoline and Its Combustion Products. Report of U. S. Bureau of Mines (1927).

Physical and Chemical Laws and Principles Used in the Petroleum Industry

AVOGADRO'S HYPOTHESIS

(Same number of molecules in unit volume)

Equal volumes of all substances, when in a state of gas, under like conditions of temperature and pressure, contain the same number of molecules.

The application of this theory is an important tool for the petroleum technologist. It is designated an hypothesis because it has not been possible to determine the truth of the statement with every substance; however, all investigators have found the theory to be supported by experimental evidence whenever tested.

It is from Avogadro's hypothesis that it is possible to derive the fundamental unit volume of 379 cu. ft. of methane, ethane, propane, etc., at 60° F. and standard pressure of 760 mm., equals 1 mol of each. Example: In 1,500 cu. ft. of gas, or gas mixture, at 60° F. and 760 mm. pressure there are 1,500/379 = 3.9 mols.

Character of Wax Encountered During Production of Oil

Have you any data concerning the kinds of paraffin encountered in the production of oil wells? What amount is produced in this way in the wells of Texas and Louisiana?—D. H.

Paraffin wax as found in oil wells is the same chemical material that is separated from oil by the refiner. The difference is in crystalline form, the wax that collects in a well is commonly termed amorphous, but is truly composed of very minute microscopic crystals mixed with gums, oil, asphalt, water and silt.

The high temperature to which the wax distillate is subjected in the refining process favors the formation of large crystals after the oil is withdrawn and the wax is slowly cooled. The oil present is considered to be the largest factor influencing crystalline structure. It is also possible that the refining process removes gums and resinous substances that tend to retard, or inhibit, crystallization.

The United States Bureau of Mines reports some oil-well wax has contained 20 per cent water and silt. This silt is mostly fine sand, clay, salt, together with calcium and magnesium carbonates. Sulfates of calcium barium and strontium are also frequently present. The consistency varies from soft grease-like to hard masses resembling ozokerite. The Bureau of Mines lists the following causes for paraffining wells: 1. Chilling incident to sudden reduction of pressure and expansion of gas. 2. Diminished solubility under lowered pressure. 3. Churning action. 4. Evaporation and drying action of natural gas. 5. Alternate wetting and drying of sand. 6. Leakage of salted waters into wells.

Texas Panhandle oil deposits a large quantity of wax. Bechtel and Bienkarn state the Hutchison County oil has a gravity about 37° A.P.I., congeals between 50° and 55° F. The bottom-hole temperature is about 95°F. The wax deposits from the oil up to 80° F. and the deposited wax melts between 140° and 145°F. It is black with a light brownish tinge and becomes quite hard with age. It deposits in wells and lines. The remedies applied include: frequent pulling of rods, steaming tubing, and running steam or hot water between tubing and casing. The conditions in other states are similar.

Recently an improved process for removal of paraffin deposits from wells, etc., has been introduced in which chemical solvents are used. The exact composition of some of the solvents used for this purpose has not been revealed. At 25°C. (77°F.) pentane dissolves 17 parts of wax per 100 parts solvent and hexane 16 parts.

No information is available showing the quantity of wax produced in wells. This wax, obtained as a cleanout product, is seldom marketed.

References: R. Van A. Mills, Paraffin Problem in Oil Wells, United States Bureau of Mines. R. I. 25501 (1923). Bechtel and Bienkarn, A.P.I. meeting, June 1928, Sec. 4.

Questions on Petroleum Technology may be sent to Dr. Charles K. Francis, The Oil and Gas Journal, Tulsa, Okla. When a copy of the answer is desired, postage should be included.

FIELD OPERATIONS

Summarizing the Week's Developments

TEXAS: Gulf Coast—A new oil pool is assured 2½ miles southwest of the Cheek pool in Jefferson County by results of a drill-stem test in a 7,800-ft. horizon. Distillate production from a new sand at 7,927 ft. in Jefferson County is recorded. West Ranch field in Jackson County took on importance, as a test 1½ miles from the discovery well flowed 55 bbl. of oil in 16 hours.

Southwest Texas—The recently opened Minnie Bock pool in Nueces County is promised a 2,200-ft. extension. A test to 9,000 ft. is scheduled for the East Mathis pool in San Patricio County by the Seaboard Oil Co.

West Texas—It is confidently expected that the Wasson and Bennett fields in Yoakum County will be joined by the present crop of tests in what is known as the "between" area. Six months ago the limits of the pools were 5 miles apart. Meanwhile development has brought the pools closer to one another. In eastern Cochran County a pool was opened by a 400-bbl. well at 5,002 ft. It is 1½ miles north and west of the Dean pool. A new and deeper pay has been opened in the North Cowden pool in Ector County by a well good for 450 bbl. a day at 5,155-57 ft. Schleicher County, where two oil pools have been opened in three weeks, is increasing in importance.

West Central Texas—A new and deeper pay has been found in the Knight pool in Young County. The Ivy pool in Shackelford County was extended, and a deeper pay was opened in the Guitar pool in Jones County.

North Texas—One of the largest wells yet completed in Archer County is in the Sikes pool and is flowing over 100 bbl. an hour from sand at 4,380-4,415 ft. It is owned by Louis Sikes. The Hull-Silk area in Archer County is receiving a lot of attention from operators. An important Clay County wildcat drilled by L. T. Burns was dry at 5,202 ft.

OKLAHOMA—An uneventful week in the state. Closely watched wildcats were still in the noncompleted stage in various counties. Important deep tests were started in Cleveland and Hughes counties.

KANSAS—A very profitable week is seen in the new pools opened or in prospect in Section 20-17-15w, Barton County, and in Sections 25-20-6w and 27-19-10w, in Rice County. The Pawnee Rock pool in Pawnee County was extended ½ mile and the Burrton field was given an extension on its Harvey County side. The Hittle pool had a 10,000-bbl. well and one good for 4,770 bbl.

ILLINOIS—Sixty-one oil wells were completed in the state, one of them good for 7,381 bbl. per day, the largest well yet drilled in the Central basin fields. The lucky operator was W. C. McBride, Inc. The second Devonian lime well was brought in in the old Sandoval field in Marion County, offsetting the first deep producer. It made a large flush short-period production but is believed to be good for 300 bbl. a day in settled production.

MISSOURI—A well in Putnam County had nothing but fresh water in St. Peter sand but continued drilling for the Arbuckle lime. Dry holes in Jackson and Clay counties were reported at shallow depths. A wildcat in Platte County had water at 1,155-60 ft., 170 ft. below the top of the Mississippi lime, but was still drilling.

Completions in All Fields

(Week Ending June 24, 1939)

	Oil	Gas	Dry	Total	1939 total comp. to date	1938 total comp. to date
N. Y., Pa., and W. Va.	44	11	4	59	1,471	1,936
Ohio	10	10	5	25	449	453
Indiana	1	0	0	1	106	42
Kentucky	6	1	8	15	296	391
Illinois	61	0	15	76	1,639	520
Michigan	15	0	11	26	619	391
Kansas	24	1	7	32	561	841
Oklahoma	27	4	10	41	879	859
Texas:						
North Central Texas	21	1	13	35	1,136	1,537
West Texas	22	0	2	24	893	1,121
Texas Panhandle	3	2	0	5	182	304
East Texas	8	0	0	8	248	1,075
East Central Texas	2	0	3	5	125	173
East Texas Border	2	0	0	2	34	81
Gulf Coast Texas	18	0	2	20	657	622
Southwest Texas	35	1	11	47	1,137	1,036
Total Texas	111	4	31	146	4,412	5,949
North Louisiana	5	1	3	9	252	307
Gulf Coast Louisiana	9	0	3	12	275	235
Total Louisiana	14	1	6	21	527	542
Arkansas	4	0	3	7	119	123
Montana	2	0	1	3	66	39
Wyoming	2	0	0	2	45	78
Colorado	0	0	0	0	4	5
New Mexico	13	0	1	14	289	278
Utah	0	0	0	0	0	0
California	16	0	1	17	446	643
Total United States	350	32	103	485	11,928	13,090
Total previous week	353	39	113	505		
Week ending June 25, 1938	369	34	126	529		

Outstanding Fields—Highlights

(Week Ending June 24, 1939)

FIELD—	Rigs up	Wells drlg.	Weekly oil completions	Initial prod.	Total No. oil wells	Daily av. prod.
TEXAS						
K.M.A.	22	48	5	5,261	1,024	24,698
Wasson-Bennett	18	52	1	880	313	15,227
Ector County	27	59	6	5,838	1,730	49,550
Pecos County	14	34	5	1,980	1,145	30,450
Jones County	10	25	4	3,904	506	8,200
East Texas	11	31	8	485	25,924	372,748
OKLAHOMA						
St. Louis	6	37	6	1,248	846	36,750
KANSAS						
Barton County	1	16	1	335	434	14,832
Ellis County	2	15	5	2,164	391	10,013
Rice County	4	28	3	1,096	1,337	32,305
Russell County	5	33	4	1,926	1,253	22,522
NEW MEXICO						
Lea County	5	65	10	1,651	2,160	107,020
LA-ARK-TEX						
Magnolia, Ark.	2	12	3	1,250	33	8,465
Cotton Valley, La. (deep)	0	8	0	0	131	13,660
MICHIGAN						
Freeman-Redding	4	22	1	1,320	87	13,663
Kent County	6	26	5	2,625	56	5,226
CALIFORNIA						
Wilmington	4	17	3	1,884	643	81,500
CENTRAL ILLINOIS						
Salem field	5	96	26	17,118	990	131,210
Louden field	6	80	23	4,965	908	44,115
Other new areas	24	194	13	4,489	1,389	49,359

Old Illinois fields with 13,500 wells produced 7,752 bbl. daily.

Illinois and Kentucky

By STAFF CORRESPONDENT

McBride Lee Lease in Salem Yields State's Largest Well

MATTOON Ill., June 26.—Sixty-six new operations were listed in the past week in Illinois, seven of them being wildcats. Completions for the week totaled 76, with 15 of that number being dry holes and 61 oil wells.

Fayette County had 24 new operations, with 20 of them in the Louden field and four in the St. James pool. Carter Oil Co. accounted for 12 starts in Louden with two scheduled for gas-input purposes. There was a total of 22 starts in Marion County, with all but one scheduled for the Salem pool in which Texas Co. was starting 10 new wells.

Wayne County continued to attract the attention of the independent operators with nine new wells started by that group and an additional one by Pure Oil Co. Jefferson County had two starts, Washington County two, and Richland and McDonough one each.

Largest well in Illinois oil history was completed at the W. C. McBride, Inc., No. 10 Lee, NW NE NE Section 29-2n-2e, in the Salem field in Marion County, which flowed 7,381 bbl. of oil from the McClosky lime on a 24-hour test. The well is located on the same lease with a former record holder, McBride No. 8 Lee, NE NE SE Section 29-2n-2e, which was completed recently for 5,581 bbl. from the McClosky.

The most interesting well of the week, a test to the Devonian north of Sandoval, was only partially completed at the close of the report, but it gave indications of being a good producer. It is J. W. Menhall No. 1 Menhall-Benoist, C E½ NE NW Section 8-2n-1e, Marion County, which flowed 39 bbl. of 42-gravity oil in 15 minutes; a gage of the well awaited the completion of adequate tankage. The Devonian was topped at 2,875 ft.; gas at 2,913 ft. and oil at 2,919 ft. The hole is bottomed at 2,924½ ft., with casing set at 2,905 ft. It may be drilled deeper in an effort to get the complete pay section.

Three tests encountered heavy gas pressures while drilling but all were capped before extensive damage was done. Ohio Oil Co. No. 1 R. A. Chapman, SW SW NW Section 13-4n-9e, a northern outpost in the Noble-Denver field in Richland County, flowed wild from the McClosky at an estimated 12,000,000 cu. ft. daily of sour gas. Angle and Eason Oil Co. No. 1 Storms, C W½ SE SW Section 14-6s-9e, White County, was attempting to plug back and recomplete when an estimated 8,000,000 cu. ft. daily broke in. Texas Co. No. 4 Telford, SE SE NE Section 29-2n-2e, created some excitement in the Salem field when it blew in after drilling the McClosky. On test, after capping, the well made an estimated 3,000 bbl. daily.

First Tar Springs production in Illinois was recorded in the Clyde Washburn No. 1 Pfeiffer, SW SW SW Section 13-1s-13w, Wabash County, when it produced 49 bbl. after being plugged back to 1,955 ft. and shot with 10 qt. and 20 qt.

Largest well in the Louden field was Carter Oil Co. No. 1 Martha Taylor, NE NW SW Section 33-8n-3e, which swabbed 460 bbl. Ladd Oil Co. No. 3 Young Church, SW SW NW Section 21-2n-2e, led the Aux Vases wells with an initial flow reported to be 1,440 bbl. daily. W. R. Curry No. 4 Young Strip, NE SE SE Section 20-2n-2e, flowed 75 bbl. an hour for an estimated 1,800 bbl. daily from the McClosky.

Puckett No. 1 Oakley, NE NW NE Section 34-2s-2e, Barnhill pool in Wayne County, flowed 60 bbl. per hour and was considered good for 1,000 bbl. daily. The Illinois Mid-Continent Oil Co. No. 1 Emma Wilson SW NW NW Section 35-2s-8e, flowed 1,000 bbl. in 7½ hours.

Fayette County had 23 successful completions for a total initial production of 4,965 bbl., Marion County had 25 completions, all in the Salem field, for an initial of 9,888 bbl. daily. Most of these latter wells were given only 3-hour tests and their estimated potentials totaled 17,623 bbl. daily. Richland County had two new wells with 211 bbl. initial; Clay County had five wells for a total initial of 2,377 bbl. daily; Wayne County, 1,660 bbl. of new initial production from three wells; Jefferson County had one completion for 168 bbl. and some water; Washington County had one for 48 bbl. initial, and St. Clair County had a 20-bbl. well that showed lots of brine.

Yakey and others No. 1 Fluga, NW NE NW Section 34-10n-5e, Shelby County, had Cypress sand at 1,808-59 ft., Benoist at 1,973-92 ft., and reached a total depth of 2,180 ft. in the St. Louis lime, showed water in sand at 1,975-88 ft., and collapsed the casing between 1,920-36 ft. when shot with 20 qt. The well was abandoned.

E. R. Bran and others No. 1 Baughman, NE NW SE Section 20-9n-14w, Clark County, was dry and abandoned at 1,027 ft.

Producers Oil & Development Co. No. 1 Snyder, C W½ SW NE Section 7-8n-13w, Crawford County, was dry and abandoned at 1,385 ft.

Illinois Fields

HIGHLIGHTS OF THE WEEK: Again W. C. McBride, Inc., scores with the largest well in the state with its No. 10 Lee in Section 29-2n-2e, Salem field, Marion County. The new well produced 7,381 bbl. in 24 hours. The same company's No. 8 Lee started at 5,581 bbl. a day in the previous week. There were 10 producing wells on the lease at the close of this report. The second Devonian lime well in the old Sandoval field was credited in a later report with a 300 bbl. per day potential, or much smaller than earlier reports which said the well was good for 3,000 bbl. a day.

Daily average production of new fields, 224,684 bbl.; old fields, 7,752 bbl.; total, 232,436 bbl.

Total operations including locations, rigs and wells drilling, 452.

Louden Completions

In the Louden field, Fayette County, Carter Oil Co. No. 1 Musser, SW SE SW Section 2-8n-3e, swabbed 28 bbl. in 24 hours from stray sand at 1,569-83 ft. after a shot with 20 qt. at 1,578-84 ft. The well was then shot with 10 qt. at 1,510-15 ft. and completed for 102 bbl. of oil, flowing. Carter Oil Co. No. 4 Bob Fortner, NE NW SE Section 10-8n-3e, flowed 348 bbl. after a shot with 30 qt. at 1,595-1,601 ft. and with 30 qt. at 1,509-21 ft. Carter Oil Co. No. 1 Gerald Miller, SW NW NE Section 11-8n-3e, had Cypress sand at 1,481-1,521 ft. and stray at 1,565-83 ft. It produced 100 bbl. on the pump after a shot with 20 qt. in the stray sand and the casing ripped opposite the Cypress. Carter Oil Co. No. 2 O. C. Wood, NW NE NW Section 11-8n-3e, shot with 10 qt. at 1,594-97 ft. and with 30 qt. at 1,518-25 ft., the well was given an initial production of 216 bbl. in 24 hours. Carter No. 2 John Sloan, NE NW NW Section 11-8n-3e, was completed for 90 bbl. of oil on the pump at a total depth of 1,601 ft. Carter Oil Co. abandoned No. 1 Dorothy Metter, SE NW NE Section 16-8n-3e, at 1,614 ft. Both the Cypress at 1,528 ft. and the stray at 1,597 ft. showed water.

Whisenant and others completed No. 11 Lilly, SE SE SW Section 16-8n-3e, for a 225-bbl. pumper in the stray at 1,548-74 ft., after shooting it with 40 qt.

Carter Oil Co. No. 3 J. F. Wright, SE SW NE Section 21-8n-3e, was a light producer of 54 bbl. from Bethel at 1,600-40 ft. after a shot of 10 qt. The same company's No. 4 J. B. Drees, SW SE NW Section 22-8n-3e, was completed in three sands for an initial of 318 bbl. of oil. The Cypress from 1,356-94 ft. yielded 68 bbl., the stray from 1,443-62 ft. yielded 100 bbl., and the Bethel from 1,472-95 ft. produced 150 bbl. Removable casing was run opposite the Cypress.

Carter Oil Co. No. 1 K. Stubblefield, SE SW NE Section 22-8n-3e, had Cypress at 1,446-86 ft., and Bethel at 1,557-77 ft. The well produced 225 bbl., flowing, after a shot with 20 qt. in Bethel, and 20 qt. in Cypress, after disposing of the removable casing set at 1,448-73 ft. Carter Oil Co. No. 1 Mills, SE SW NW Section 28-8n-3e, had a good show of gas in the Tar Springs at 1,133-48 ft., and was completed in Bethel at 1,513-31 ft. after a 20-qt. shot, for 83 bbl., and the well produced 72 bbl. in 24 hours after running tubing. E. Frank Jones No. 1-A Zanders, SE SE NW Section 36-9n-3e, was completed for 25 bbl. of oil in 24 hours from Cypress at 1,552-88 ft. after being shot with 20 qt. and plugged back with 12 sacks of cement.

Carter Oil Co. No. 4 Orville Mills, SE SW SW Section 28-8n-3e, flowed 102 bbl. Bethel was shot with 20 qt. and production was obtained from the upper sands by ripping the casing at several points between 1,409 and 1,536 ft. Oils, Inc., No. 9 Blurton, SE NE NW Section 32-8n-3e, flowed 200 bbl. from Bethel at 1,439-86 ft. after a shot of 30 qt. Carter Oil Co. No. 1 Laura McClain, NW SW SW Section 33-8n-3e, had a potential of 228 bbl. on the swab after shooting the Bethel at 1,573-91 ft. with 10 qt. and ripping the casing at six points between 1,471 and 1,520 ft. Carter No. 1 Martha Taylor, NE NW SW Section 33-8n-3e, swabbed 460 bbl. from the Bethel at 1,569-88 ft. after a 30-qt. shot and ripping the casing at several points between 1,452 and 1,554 ft.

Carter Oil Co. No. 2 Jack Dial, NE SW NW Section 34-8n-3e, swabbed 326 bbl. from Bethel and Cypress sands. Bethel at 1,593-97 ft. was shot with 10 qt., Cypress at 1,507-43 ft., with 30 qt.

Nash Redwin No. 1 Logue, NE SE SE Section 13-7n-2e, Fayette County, made 130 bbl. on the pump from sand at 1,535-54 ft. after a 10-qt. shot.

Carter Oil Co. No. 2 Ed Harper, SE SW NW Section 17-7n-3e, swabbed 136 bbl. from stray at 1,548-62 ft. after a 20-qt. shot and from Cypress at 1,463-1,513 ft., after ripping the casing. Same company's No. 1 Cora Miller, SW SE NW Section 17-7n-3e, swabbed 240 bbl. from stray at 1,522-70 ft. after a 40-qt. shot, and Cypress at 1,475-1,518 ft. after removing the casing and shooting with 10 qt.

Carter Oil Co. No. 4 L. Huckert, SW NE SW Section 20-7n-3e, Fayette County, had Cypress sand at 1,511-50 ft. and after a 60-qt. shot the well swabbed 428 bbl. of oil.

The No. 3 Breeze of the Minerva Oil Co. in SE NE NE Section 20-7n-3e, pumped 210 bbl. after a 60-qt. shot in Cypress found at 1,520-70 ft. Carter Oil Co. No. 7 Phyliss Reece, SE SW SE Section 30-7n-3e, swabbed 380 bbl. from Cypress sand at 1,516-51 ft. after a 60-qt. shot.

In the St. James pool in Fayette County, Schulman Brothers No. 3 Combe, NE NW SW Section 6-6n-3e, had an initial pumping potential of 350 bbl. from Cypress after a 30-qt. shot at 1,533-65 ft. Same company's No. 5 Combe, NW SW SW Section 6-6n-3e, was dry in the Cypress at a total depth of 1,603 ft. and was

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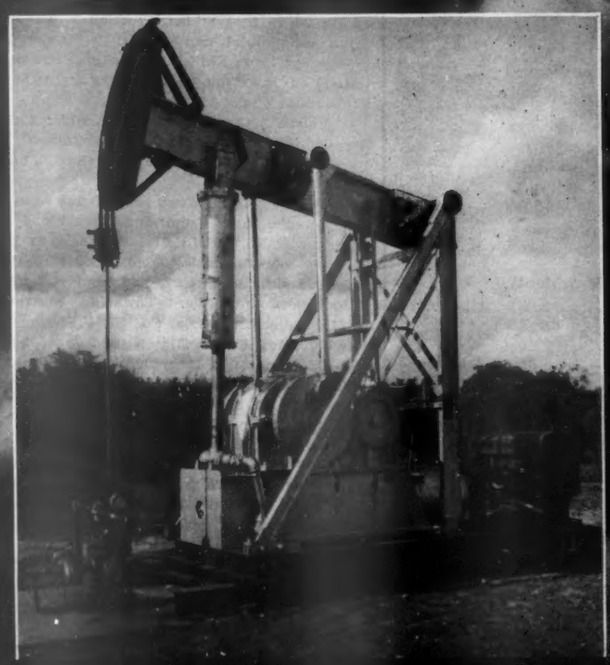


THE CUSHIONING EFFECT OF COMPRESSED AIR PROVIDES A SMOOTH ACTING AND EFFICIENT COUNTER BALANCE. HEAVY COUNTERWEIGHTS CAUSING EXCESSIVE VIBRATION AND SHOCK STRESSES ARE ELIMINATED.

REED ROLLER BIT CO.

abandoned as an oil test but may be used for salt water disposal purposes.

Edward Greik No. 2 Harry Gutteridge, C S½ SW NW Section 32-3n-12w, Lawrence County, was abandoned at 2,280 ft., after having the Ste. Genevieve at 2,160 ft.

In Richland County, Andrews and others No. 1 Wattleworth, SW SW SE Section 26-4n-10e, was completed for a 16-bbl. well in saturated lime at 3,121-28 ft. after acidizing. Pure Oil Co. No. 1 C. H. Storer A, SE SE SE Section 14-4n-9e, was completed for 200 bbl. of oil and 83 bbl. of water in the McClosky at 2,913-14 ft. after being treated with 5,000 gal. of acid. Lambert and others No. 1 Brookmeyer, SW NW NE Section 8-3n-8w, Madison County, was dry and abandoned at 1,934 ft.

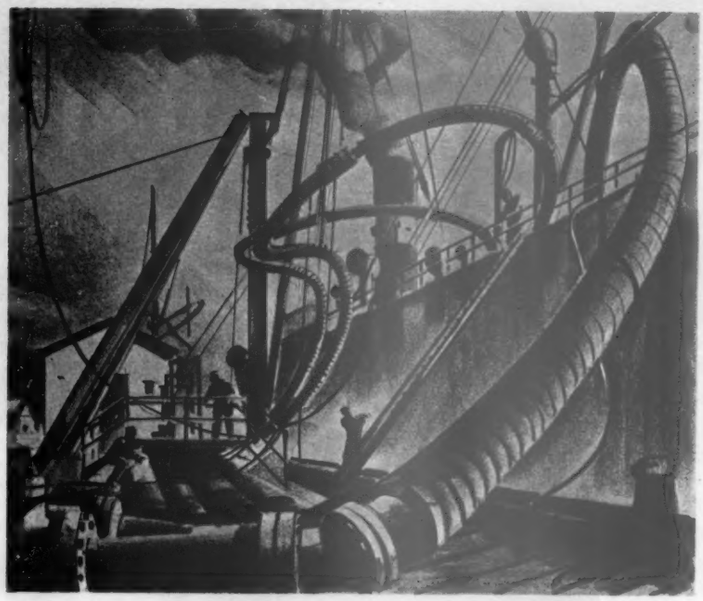
J. Liokey No. 1 Quick, SW NW SE Section 35-3n-1e, Marion County, was dry and abandoned at 2,050 ft. after finding the McClosky at 1,975 ft.

Pure Oil Co. No. 6 E. R. Priestman A, SE NE NW Section 5-2n-8e, Clay County, was completed for 333 bbl., flowing, at a total depth of 3,085 ft., after a 5,000-gal. acid treatment. Same company's No. 1 Holman, C E½ NE NE Section 6-2n-8e, had saturated McClosky at 3,112-22 ft. and flowed 554 bbl. on test. Pure Oil Co. No. 8 Leon Clark, W½ SW NW Section 8-2n-8e, Clay County, had the pay in streaks at 3,019-52 ft. and flowed 408 bbl. of oil in 12 hours. After acidizing with 5,000 gal. the well made 1,860 bbl. on test. Pure No. 2 Holmes Consolidated, SW SE NE Section 6-2n-8e, had McClosky pay at 3,028-43 ft. and at 3,118-23 ft., and flowed 1,018 bbl.; total depth 3,135 ft. Andy Bruner No. 4 Kuyoth, SW NE NW Section 30-2n-8e, was a 64-bbl. pumper after a 3,000-gal. acid treatment at a plugged back depth of 3,025 ft. after being drilled to 3,073 ft.

Marion County

In the Salem field, Ohio Oil Co. No. 12 C. E. Lloyd, SE NW NE Section 33-2n-2e, was estimated at 400 bbl. initially after a 40-qt. shot in Benoist at 1,812-60 ft. Baldwin No. 5 Holmes, NE SW NE Section 33-2n-2e, had Benoist at 1,835-75 ft. and flowed 300 bbl. after a 30-qt. shot. Texas Co. No. 4 E. Farthing, NE NW SE Section 32-2n-2e, Benoist 1,739-95 ft., rated at 420 bbl. after flowing 60 bbl. on a 3-hour test. Texas No. 4 O. Telford, SE SE NE Section 29-2n-2e, rated at 3,000 bbl. a day after flowing 166 bbl. in 1 hour from the McClosky at 1,943-2,049 ft. Texas No. 7 R. Shanafelt, NE NE NE Section 29-2n-2e, McClosky at 1,936-2,018 ft., flowed 184 bbl. naturally in 3 hours, was acidized with 3,000 gal. and flowed 157 bbl. in 3 hours for a rated potential of 1,057 bbl. Texas Co. No. 4 R. Frederick A, NE NW NW Section 29-2n-2e, Benoist at 1,832-94 ft., flowed 28 bbl. in 3 hours, rated at 196 bbl. daily. W. C. McBride, Inc., No. 9 N. L. Lee, NE NE SE Section 29-2n-2e, had the Aux Vases at 1,780-1,821 ft. and was shot with 100 qt. and flowed 136 bbl. in 4 hours for a rating of 816 bbl. daily. Texas Co. No. 13 Lee, NW NW SW Section 28-2n-2e, flowed 150 bbl. in 3 hours after being acidized in the McClosky at 1,961-2,045 ft. It was rated for 1,050 bbl. daily. Ohio Oil Co. No. 13 C. E. Floyd, NW NE SE Section 28-2n-2e, Benoist at 1,813-34 ft., was estimated at 125 bbl. after being shot with 40 qt. Texas No. 15 N. Young, SW SE NE Section 20-2n-2e, acidized with 3,000 gal. in McClosky at 1,947-2,026 ft., flowed 60 bbl. in 3 hours; estimated at 420 bbl. daily. Ladd Oil Co. No. 3 Young Church, SW SW NW Section 21-2n-2e, shot with 50 qt. in Aux Vases at 1,830-71 ft., reported to have made 1,440 bbl. in 24 hours. Shell Oil Co. No. 10 Young Heirs, NW SE SE Section 20-2n-2e, flowed 1,244 bbl. from a total depth of 2,052 ft. after acid

(Continued on Page 82)



Loading Texas Oil — *from a Lithograph by E. M. Schiwetz*

No less a personage than General Hugh Johnson has termed Houston the "oil capital of America". And so it is: a center of international importance for every branch of the petroleum industry.

As a matter of course, the FIRST NATIONAL in Houston has developed complete banking facilities for oil men and oil companies. Of particular value to many of our customers is the special department which handles oil loans. The officers in charge of this department will be glad to discuss your credit requirements at any time.

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CENTRAL OHIO

FINDLAY, Ohio, June 26.—Central Ohio fields and Lima fields account for 17 completions: 8 gas wells, 5 dry holes, and 4 oil wells in the past week's roundup One of the wells is producing from the Medina horizon in Muskingum County. Licking County has a 1,500,000-cu. ft. gas well in the new development east and north of Newark.

In Athens County, Carthage Township, Fairfield Gas Co. No. 5 H. R. Watkins, Fraction 3, was dry in the Injun sand; total depth 1,300 ft. Rome Township, Koontz & Gibson No. 5 J. M. Felton, Section 30, gaged 750,000 cu. ft. of gas on open flow from the Maxburg 800-ft. sand at 985-1,005 ft.

In Fairfield County, Berne Township, City Natural Gas Co. No. 2 Matilda Bowers, Section 33, made an open flow of 115,000 cu. ft. from the Clinton sand at 2,072-91 ft.

In Guernsey County, two small Berea sand gas wells were completed. In Cambridge Township, Ronshausen & Ridgeway No. 1 G. B. Moss had sand at 1,037-61 ft. In Millwood Township, Ohio Fuel Gas Co. No. 1 Charles Smith, Section 22, had sand at 1,498-1,505 ft.

Hocking County, Ward Township, Preston Oil Co. No. 1 Sunday Creek Coal Co., SE¼ Section 23, had a showing of oil in the Clinton sand at 3,530-58 ft. The hole filled up 2,000 ft. with oil. It will not be shot until proration is lifted, but is estimated it will shoot in at about 75 bbl. per day.

Licking County, Mary Ann Township, Settles Oil Co. No. 1 James Shannon, fourth quarter, Lot 15, made 7 bbl. of oil the first 24 hours after a shot in the Berea sand at 665-70 ft. Newton Township, Ohio Fuel Gas Co. No. 1 C. B. Wilson, fourth quarter, gaged 1,450,000 cu. ft. of gas on open flow from 25 ft. in the Clinton sand topped at 2,564 ft.

Muskingum County, Harrison Township, Swingle and others No. 1 George Bussemer, Section 6, had a

(Continued on Page 66)

WESTERN KENTUCKY

OWENSBORO, Ky., June 26.—Springrose Drilling Co. will abandon its No. 2 Ray Pillman in the Reed district in Henderson County because of its disappointing showing in McClosky lime at a total depth of 1,986 ft. Snowden & McSweeney were drilling in Mississippi lime after passing through the McClosky lime in No. 1 C. H. Abel Heirs, in the Thurston district of Daviess County. The best well of the week was Cumberland Petroleum Co. and others No. 2 Ora Brown Heirs, which was producing 10 bbl. per hour at a total depth of 408 ft. It is in the Huntsville district.

Following were the completions of the week in western Kentucky, and the new operations:

Butler County, Silver City district: Rex-Pyramid Oil Co. No. 1 W. A. Baker, total depth 500 ft., dry and abandoned. Huntsville district: Cumberland Petroleum Co. and others No. 2 Ora Brown Heirs, total depth 408 ft.; producing 10 bbl. per hour. Cumberland Petroleum Co. and others No. 1 Robert Ward, rigging up.

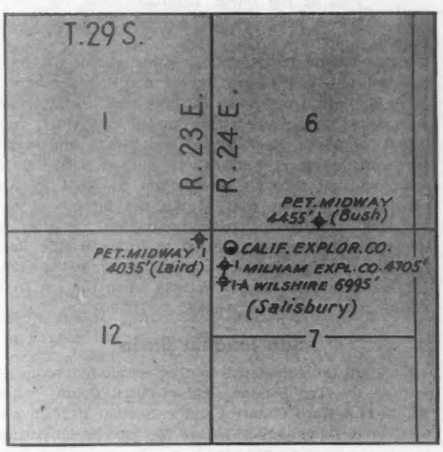
(Continued on Page 63)

California Field Report

By
L. P. STOCKMAN

Montebello's West Side Due for New Drilling Campaign

LOS ANGELES, Calif., June 26.—Hathaway Oil Co., by completing No. 1 Dore flowing 1,450 bbl. of clean 36.8-gravity oil and 1,750,000 cu. ft. of gas per day from the high-pressure La Merced zone in the west end of the Montebello field of Los Angeles Basin, has started a new wave of drilling wells south of Beverly Boulevard and within two weeks it is believed there will be at least 15 wells drilling in that area. No. 1 Dore was completed last year as a good well from 7,181 ft., but died in May of this year and was deepened to 7,662 ft. and brought in flowing through a 54/64-in. bean. This is the first finished south of Beverly Boulevard and its completion extends the La



California Exploration Co. drilled to 12,989 ft. in this well in the Button Willow district, finding water condition at the bottom that prevented testing. Now it will test formations up the hole

Merced zone. No. 1 Padden of Ring Oil Co., No. 1 Beech of McVicar & Rood, No. 1 De Staute and No. 1 Graham of Graham & Loftus have already been started and additional locations have been staked. No. 1 Beech of McVicar & Rood is a direct offset of No. 1 Dore of Hathaway Oil Co. and seems assured of good production. The limits of production in the Montebello field have not been established to the north, south or west. The rush now getting started south of Beverly Boulevard may carry wells several blocks south of this street. This is a town-lot drilling campaign although in some cases several lots have been blocked into a community lease that approximates one or more acres. Operators have not yet started moving houses to make locations for new wells, but will probably begin in the very near future. In most cases the leases covering such a procedure contain a clause calling for a payment of $1,500 to cover the cost of moving the house to a new location. This is a comparatively small sum compared with the cost of drilling a 7,500-ft. hole, so this expenditure will not retard drilling operations.

In the west end of the Montebello field, Vulcan Oil Co. No. 1 Nash was returned to production flowing 1,380 bbl. of 36.2-gravity oil and 1,000,000 cu. ft. of gas per day through a 1-in. bean from the La Merced zone with bottom of the hole at 7,648 ft. Indicative of the relatively short life of flowing wells in this field is the fact that No. 1 Nash was completed April 20, 1939, in the Masser zone from a depth of 6,689 ft. and produced for about six weeks before it was found necessary to deepen the hole to the La Merced zone from which sand it is at present producing. This rapid decline in production has been an outstanding characteristic of fifth, sixth and seventh zones and will probably mark exploitation of the La Merced zone now undergoing intensive development. Despite the failure of zones above the La Merced horizon to hold, operators have not lost any enthusiasm and are starting new wells with clock-like regularity.

No. 2 Massar of Herley-Kelly, Inc., and No. 1 Montebello of Stanley Oil Co. showed large production as the former was brought in flowing 1,750 bbl. of clean 47.8-gravity oil and 2,250,000 cu. ft. of gas per day through a ½-in. bean and the latter was completed flowing 1,730 bbl. of clean 40.8-gravity oil daily along with 1,300,000 cu. ft. of gas through a 32/64-in. bean. No. 2 Massar was finished with an 8⅝-in. water string cemented at 7,003 ft. and 652 ft. of 6⅝-in. liner including 135 ft. of perforated landed at 7,625 ft. The top 80 ft. is removable liner and bottom of the hole is at 7,662 ft. No. 1 Montebello was finished with 649 ft. of 5-in. liner including 240 ft. of 120-mesh perforated landed at 7,621 ft. and cemented through perforations at 7,370 ft. Standard Oil Co. completed No. 6 Whitehead flowing 750 bbl. of 36.3-gravity oil and 850,000 cu. ft. of gas per day from a depth of 7,655 ft. This well, which was brought in flowing through a 32/64-in. bean behind a tubing pressure of 200 lb. and a casing pressure of 750 lb., was finished with 656 ft. of 6⅝-in. liner including 117 ft. of perforated landed at 7,655 ft. and cemented through perforations at 7,532 ft. Union Oil Co., Kern Oil Co., McVicar & Rood and Standard Oil Co. are putting the finishing touches on new wells and should have them tanking oil within a few days.

Coles Levee

Tide Water Associated Oil Co. No. 61 Kern County Land in the Coles Levee field of Kern County was brought in flowing 720 bbl. of clean 33.4-gravity oil and 813,000 cu. ft. of gas per day from the Stevens sand with bottom of the hole at 10,010 ft. No. 61 Kern County Land is located in Section 14-31-25. It extended the field more than ½ mile southward. It topped Stevens oil sand at 9,932 ft., was brought in flowing through a 56/64-in. bean after the hole had been finished with a 7-in. water string landed at 9,910 ft. The bit was still in the pay when drilling operations were concluded for a production test. In No. 20-1 Kern County Land, Standard Oil Co. found it impossible to fish out the drill pipe that had twisted off in the hole

TANKER SHIPMENTS FROM LOS ANGELES TO DOMESTIC AND FOREIGN PORTS

	June 17		June 10			
	Total this week	Daily average	Total last week	Daily average	This year to date	Same time last year
Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	247,520	203,139
Fuel oil	133,415	19,059	.....	.....	1,017,906	.....
Diesel and gas oil	.....	.....	.....	.....	163,501	.....
Gasoline	145,171	20,739	.....	.....	1,493,684	1,469,363
Kerosene	.....	.....	.....	.....	122,200	199,453
Foreign exports—						
Crude oil	295,991	42,284	171,455	24,494	7,139,072	11,813,947
Fuel oil	336,376	48,054	185,053	26,436	4,231,455	4,022,112
Diesel and gas oil	211,799	30,257	49,985	7,141	2,998,784	2,795,902
Gasoline	90,207	12,887	220,789	31,541	3,577,203	3,197,087
Kerosene	120,460	17,209	31,704	4,529	773,750	574,647
Lubricants	.....	.....	.....	.....	42,034	15,564
Coastwise-domestic—						
Crude oil	122,671	17,524	270,571	38,653	5,691,943	5,124,526
Fuel oil	210,437	30,062	22,142	3,163	4,241,674	4,996,691
Diesel and gas oil	12,685	1,812	15,742	2,249	1,140,029	821,083
Gasoline	397,214	56,745	330,593	47,228	6,788,415	6,889,817
Kerosene	.....	.....	4,371	624	177,653	137,831

TANKER SHIPMENTS FROM SAN FRANCISCO TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Fuel oil	62,774	8,968	.....	.....	124,055	.....
Diesel and gas oil	.....	.....	.....	.....	69,550	178,662
Gasoline	.....	.....	.....	.....	.....	9,499
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	2,998	428	.....	.....	14,182	13,665
Foreign exports—						
Crude oil	50,141	7,163	140,704	20,101	2,589,972	2,624,368
Fuel oil	79,876	11,411	80,311	11,473	1,476,160	1,060,946
Diesel and gas oil	31,067	4,438	105,263	15,038	1,031,860	1,028,077
Gasoline	124,343	17,763	.....	.....	1,420,772	2,401,349
Kerosene	6,547	935	.....	.....	311,799	439,164
Asphalt	36,049	5,150	.....	.....	42,968	56,258
Lubricants	.....	.....	.....	.....	285,653	184,327
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Fuel oil	77,149	11,021	84,161	12,023	2,607,202	3,065,037
Diesel and gas oil	28,390	4,056	40,488	5,784	475,631	698,620
Gasoline	231,208	33,030	314,604	44,943	3,512,420	3,160,173
Kerosene	18,770	2,681	23,255	3,322	333,733	281,609

TOTAL TANKER SHIPMENTS FROM CALIFORNIA TO DOMESTIC AND FOREIGN PORTS

Intercoastal-domestic—						
Crude oil	.....	.....	.....	.....	247,520	203,139
Fuel oil	196,189	28,027	.....	.....	1,141,961	.....
Diesel and gas oil	.....	.....	.....	.....	233,051	178,662
Gasoline	145,171	20,739	.....	.....	1,493,684	1,478,862
Kerosene	.....	.....	.....	.....	122,200	199,453
Asphalt	.....	.....	.....	.....	280,447	346,862
Lubricants	2,998	428	.....	.....	14,182	13,665
Foreign exports—						
Crude oil	346,132	49,447	312,159	44,594	9,729,044	14,438,315
Fuel oil	416,252	59,465	265,364	37,909	5,707,615	5,083,058
Diesel and gas oil	242,866	34,695	155,248	22,178	4,030,644	3,823,979
Gasoline	214,550	30,650	220,789	31,541	4,997,975	5,598,436
Kerosene	127,007	18,144	31,704	4,529	1,085,549	1,013,811
Asphalt	36,049	5,150	.....	.....	42,968	56,258
Lubricants	.....	.....	.....	.....	327,687	199,891
Other finished oil	.....	.....	.....	.....	352	.....
Coastwise-domestic—						
Crude oil	122,671	17,524	270,571	38,653	5,691,943	5,124,526
Fuel oil	287,586	41,084	106,303	15,186	6,848,876	8,061,728
Diesel and gas oil	41,075	5,868	56,230	8,033	1,615,660	1,519,703
Gasoline	628,422	89,775	645,197	92,171	10,300,835	10,049,990
Kerosene	18,770	2,681	27,626	3,947	511,386	419,440

and has started sidetracking the fish. Bottom of the hole is at 9,216 ft. and top of the fish is at 9,094 ft. Richfield Oil Corp. should hit the pay in No. 14-3-B Kern County Land in Section 3-31-25 in a short time as the bit is going ahead at 8,841 ft. Union Oil Co.'s second well in the Coles Levee field in Section 11-31-25 is nearing 5,000 ft.

Coalinga District

The most important well now under way is No. 1 Pleasant Valley Farming Co. of Superior Oil Co., south of the Gatchell area in Section 22-20-15. It had reached a depth of 8,358 ft. and while no information can be secured with respect to formation it is known that the hole is being reamed preparatory possibly to landing of casing. In the Gatchell or Southeast Coalinga field, operators are closely watching the outcome of drilling operations on No. 82-12-C of Holly Oil Co. in Section 12-20-15 as the bit is going ahead at 5,867 ft. and should reach the depth at which production is expected shortly. On the Exeter fee property, Texas Co. is making preparations to complete No. 1, which is in the pay at 8,165 ft. R. S. Lytle, drilling for former stockholders of Petroleum Securities Co., Seaboard Oil Corp. and Honolulu Oil Corp., is expected to complete No. 5-18-F in Section 18-20-16, which is standing cemented at 6,935 ft., and No. 75-7-F at 7,570 ft. before the close of another week. Up in the Northeast Coalinga field, where Amerada Petroleum Corp. found commercial production a few months ago in No. 7-17 S.P.L. in Section 17-19-16, Bandini Petroleum Co. has reached a depth of 6,830 ft. in No. 48-18 Webb in Section 18-19-16. Between this well and No. 26-17 S.P.L. of Amerada Petroleum Corp., which topped the Kreyenhagen at 7,136 ft. and is going ahead at 7,580 ft. Union Oil Co. is making good progress on the 160-acre Cook lease in Section 18-19-16. North of the Northeast Coalinga field in the Cantua and Turk areas of Fresno County, Shell Oil Co. is being delayed by a redrill job on No. 48-30 Port Costa in Section 30-17-16 at 8,900 ft. with bottom of the hole at 9,166 ft. and Texas Co. is making good footage in No. 1 Loescher in Section 12-17-16, which is down 6,700 ft. In the old West Coalinga field, Stuart Oil Co. has completed No. 1 in Section 12-21-14 pumping 20 bbl. of 27.5-gravity oil per day cutting 55 per cent from 1,410 ft.

Wilmington

Two more tideland wells were completed in the Wilmington field of Los Angeles Basin. Signal Oil & Gas Co. completed No. 1 S.P. flowing 660 bbl. of clean 27.5-gravity oil daily through an 18/64-in. bean from the lower Terminal zone with bottom of the hole at 4,260 ft. This well, which was drilled from spud to completion in 5 weeks, was finished with an 11¾-in. water string landed at 2,545 ft., an 8⅝-in. liner landed at 4,255 ft. and perforated at 2,545-996 ft., 3,097-645 ft. and at 3,684-4,253 ft. and a 5½-in. flow string landed at 3,615 ft. with packer at 3,000 ft. In order to keep within the curtailment program this well was produced from the lower Terminal zone only although the Ranger and upper Terminal are open for production when desired.

No. 3-Y of Long Beach Oil Development Co. has been completed flowing 330 bbl. of 27.7-gravity oil through an 18/64-in. bean from 3,85 ft. along with 400,000 cu. ft. of gas per day. Bottom of the well was originally at 4,027 ft., but was plugged back. The hole was finished with an 11¾-in. water string landed at 2,473 ft., an 8⅝-in. liner landed at 3,80 ft. and carrying perforations at 2,46-805 ft., 3,135-445 ft. and at 3,538-880 ft. and a 5½-in. flow string at 3,493 ft., with packer at 2,809 ft. This well is flowing primarily from a part of the lower Terminal zone, the lower part of which has been cut out by the Long Beach Harbor fault.

Union Pacific Railroad Co. completed No. 109 flowing 894 bbl. of 27.6-gravity oil per day through a 24/64-in. bean from 3,936 ft. This well was finished with an 11¾-in. water string landed at 2,536 ft. and 330 ft. of 6⅝-in. liner landed at 3,936 ft. and carrying perforations at 3,836-883 ft. and at 3,898-936 ft. and cemented through perforations at 3,834 ft. Approximately 25 per cent of the net income of the company was derived from production activities in this field. During 1937 the net to Union Pacific Railroad Co. from production in Wilmington totaled $428,-521, but this rose sharply in 1938 when the net from Wilmington production reached $4,713.900.

San Joaquin Basin

Shell Oil Co. completed another excellent producing well in the Ten Section field of Kern County when No. 78-24-A Kern County Land in Section 29-20-26 was brought in flowing 1,573 bbl. of 35.1-gravity oil cutting 10.4 per cent and 1,300,000 cu. ft. of gas per day from the Stevens zone with bottom of the hole at 8,266 ft. This well, in the northwest part of the Ten Section field, indicates the existence of a barren area between the Ten Section and Canal fields.

In the Rio Bravo field of Kern County, General Petroleum Corp. is finishing No. 2 Van Ness in Section 2-29-25. This well, which cored top of the Rio Bravo zone at 11,483 ft., is bottomed at 11,491 ft. and has a 6⅝-in. water string landed and cemented at 11,465 ft. In addition to No. 2 Van Ness there are only two other drilling wells in the Rio Bravo field, No. 10-34 Kern County Land of Union Oil Co. in Section 34-28-25, drilling at 3,650 ft., and No. 1 Fink of Superior Oil Co. in Section 27-28-25 now down 9,190 ft. Due to the high cost involved in drilling wells and the relatively small allowable production, operators have reduced drilling operations to a minimum.

In the Fruitvale field of Kern County, Pacific Southwest Oil Co. has completed No. 1 Dillon flowing 72 bbl. of clean 17.2-gravity oil per day from 4,068 ft., with 98 ft. of formation open. Meridian Petroleum Corp. spudded No. 2 in Section 23-29-27 and after landing a surface string of 13⅜-in. casing resumed drilling. This well will be carried down as a deep test with the Vedder zone expected around 8,000 ft. In Section 14-29-27, Western Gulf Oil Co. has been delayed for more than a week with No. 42-B Kern County Land due to failure to shut off water. The 8⅝-in. water string is landed at 2,922 ft. with bottom at 2,945 ft.

Standard Oil Co. completed an excellent flowing well in the Kettleman North Dome field of the San Joaquin Valley when No. 41-21-Q in Section 21-22-18, Kings County, was brought in flowing 2,587 bbl. of 37.9-gravity oil and 2,050,000 cu. ft. of gas per day from the Temblor, with bottom of the hole at 8,190 ft. In the southwestern end of the Greeley field of Kern County, Standard Oil Co. picked up the top of the

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deep zone in No. 12-6 Kern County Land in Section 30-29-26 at 11,913 ft. and was still coring ahead in the pay at 11,942 ft. Preparations are under way to set a string of casing before drilling ahead, as the last core in the bottom of the hole was a solid oil sand. This well, despite its favorable condition, is running about 290 ft. lower structurally than the lowest well yet drilled in the Greeley field.

Coastal District

Shell Oil Co. in the Ventura Avenue field completed No. 99 Taylor, flowing 2,105 bbl. of clean 32.8-gravity oil and 1,000,000 cu. ft. of gas per day from a depth of 7,350 ft. This new well was finished with 1,529 ft. of 5½-in. liner including perforations at 6,772-987 ft. and at 7,063-345 ft. The liner was landed at 7,345 ft. and cemented through perforations at 6,772 ft. Tide Water Associated Oil Co. should have No. 40 Ventura Land & Water ready for a production test in the near future as this well, which has been bottomed in the pay at 10,769 ft., is testing water shutoff on the water string. In the meantime No. 34 Ventura Land & Water has been finished at 7,700 ft. with a 7-in. water string landed at 7,520 ft. and 216 ft. of 5¾-in. liner including 152 ft. of 500-mesh perforated landed at 7,695 ft., and should be given a production test within the next day or two. British American Oil Producing Co., which recently completed an excellent flowing well on the Bolsa Chica Oil Co. Hartman lease out on the north flank of the Ventura Avenue anticline has a new rig up for No. 8 Hartman. Lloyd Corp. No. 2 Dabney-Lloyd, a recent completion which blew in rather unexpectedly, flowing between tubing and casing during the course of a fishing job, is holding up in good shape as current production is 1,020 bbl. of 31.5-gravity oil and 1,400,000 cu. ft. of gas daily. This well is flowing through a 25/64-in. bean and the operator questions the wisdom of reducing the bean any further due to the mechanical condition of the hole. When this well has declined the crew will attempt to recover the fish which developed a short time before the well was scheduled to be finished. Bottom of the hole is at 9,975 ft.

In the Hopper Canyon district of Ventura County, J. A. English completed No. 2 Lankershim in Section 13-4-19 pumping 130 bbl. of 31.9-gravity oil cutting 9 per cent daily from 2,502 ft. In the San Miguelito field of Ventura County, Continental Oil Co. is going ahead in the pay in No. 11 Grubb at 6,160 ft. and has rig erected for No. 12 Grubb, which will have an elevation of 995 ft. and be located in Section 23-3-24.

Los Angeles Basin

In the West Coyote field, Severns Drilling Co. No. 4 McNally blew out while the crew was withdrawing a "fish," and started flowing at the rate of 2,000 bbl. of 34.1-gravity oil per day. This is a higher rate of flow than that registered by any other well in the vicinity and the gravity of the oil produced is higher. The well was down 6,000 ft. and had drill pipe stuck on bottom when the well began flowing between the drill pipe and casing. The crew had previously shot off the drill collar and cemented the fish in place. The flow of the well was brought under control by pumping in about 250 sacks of heavy mud.

Empire Oil Co. completed No. 1 Samarkand, an outpost in the Playa Del Rey field, but the output, 106 bbl. fo 26.2-gravity oil cutting 2 per cent from 6,413 ft., was somewhat below expectations.

In the Dominguez field, Shell Oil Co. completed No. 98 Reyes flowing on gas lift at the rate of 1,120 bbl. net oil and 1,200 bbl. gross fluid from 7,850 ft.

In the Torrance field of Los Angeles County, D. & J. Oil Co. No. 1 Lomita, bottomed at 5,125 ft., was brought in pumping 73 bbl. of 25.3-gravity oil cutting 5 per cent. World Petroleum Corp. recompleted No. 2 Currier Flint at 4,610 ft. and returned it to production pumping 40 bbl. of 25.2-gravity oil cutting 48 per cent. This well is bottomed in the schist basement at 4,873 ft., but was plugged back to 4,610 ft. before being put on the beam. Production is coming from sand streaks in the Del Amo zone.

Dormax Oil Co. has staked location for No. 1 Dormax at Twenty-fifth Street and Gaviota in the Long Beach field with the announced intention of drilling a deep test.

Western Kentucky

(Continued from Page 60)

Daviess County, Thurston district: Snowden & McSweeney No. 1 C. H. Abell, south 100 acres, drilling deeper from 1,447 ft.; now in Mississippi lime. Snowden & McSweeney No. 1 Allen Reid, dry hole, total depth 1,531 ft. Dr. H. Rubin No. 1 Kitty Roby, location. Handyville district: Ohio Oil Co. No. 2 Steve Coomes, deepening from 1,478 ft., drilling at 1,650 ft. Panther district: Lincoln Petroleum Co. No. 3 L. I. Igleheart, dry hole, total depth 1,406 ft. Whitesville district: J. C. Ellis and F. Ashby No. 1 Frank Litsey, producing 11 bbl. a day from Jackson sand at total depth of 775 ft. Utica district: J. C. Miller, trustee, No. 3 Gus Morgan, producing 50 bbl. a day at total depth of 1,376 ft. J. C. Miller, trustee, No. 4 Gus Morgan, location. Two and three-quarters miles northeast of Rockport, Ind.: Hart and Hart No. 1 W. M. Nantz, producing 72 bbl. at total depth of 791 ft., Jett sand. Birk City district: Owens and Bordens No. 1 Mary Payne lease, abandoned location.

Hancock County, Easton district: Courtney Combs and George Freelson No. 3 H. H. Hendricks, dry hole, total depth 300 ft. Fordsville district: Courtney Combs No. 1 Font Richards, abandoned location.

Henderson County, Birk City district: Phillips Petroleum Co. No. 2 H. E. Jones, dry hole, total depth 2,110 ft. Baskett district: R. D. Baker and others No. 1 Strother Banks, dry hole, total depth 1,480 ft.

Hopkins County, Dalton district: M. B. Hughes No. 1 Bura Brown, dry hole, total depth 1,953 ft.

McLean County, Beach Grove district: Mocarz No. 5 H. T. Hardin, location.

Muhlenberg County, Belton district: Shelly Oil Co. No. 1 Shearn Coal Co., producing 25 bbl. a day at total depth of 1,538 ft.

Ohio County, Carden district: Jess Ashby and others No. 2 U. M. Coombs, dry hole, total depth 517 ft. Taffy district: J. C. Ellis and others No. 10 Feemaster and Wimsatt, location. Dundee district: W. E. Neal No. 1 E. Mattingly, location. Bell Run district: H. L. Ogle No. 7 T. E. McQuary, producing 11 bbl. at total depth of 993 ft. Narrows district: Thrasher and White No. 1 Clarence Robinson, drilling at 50 ft. Rosine district: Walter Daly and others No. 1 Sorrels Heirs, dry hole, total depth 1,075 ft.

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North and East Texas

By
D. H. STORMONT

Archer County Developments Include Big Sikes Pool Well

WICHITA FALLS, Tex., June 26.—The North Texas district passed another very eventful week as the original Hull-Silk area in Archer County drew considerable interest, and an increase in production was noted in the new Caddo lime pool opener in the same county. The third well in the Nocona pool in Montague County was completed for a gage of 130 bbl. of oil in 13 hours, and a very closely watched wildcat test in Clay County was abandoned as dry. New wildcats were starting in Wilbarger, Hardeman and Cottle counties of the western part of North Texas.

One of the largest oil producers completed in Archer County was indicated at the Louis Sikes No. 1-A O. T. Anderson, second well in the Sikes pool of northern Archer County. Flowing naturally, it was estimated at 100 to 125 bbl. per hour or at the rate of about 2,400 bbl. daily. It is in the J. S. Brooks Survey, Abstract 17, about ½ mile west of the operator's No. 1 Walter Ford, discovery well. The new well, which is showing more than 500,000 cu. ft. of gas, drilled saturated sand from 4,380-4,415 ft. and showed no water.

One mile southwest of the Hull-Silk pool Phillips Petroleum Co. and King Oil Co. No. 3 Phillips, Lot 6, Block 23, A.T.N.C.L. Survey, logged lime with stains of oil from 4,750 to 4,755 ft., and was drilling below 4,765 ft. in the Caddo section. In the Griffin pool in northwestern Archer County, Deep Oil Development Co. and E. P. Griffin No. 3 Waggoner, Section 1, Block 4, H.&T.C. Survey, was drilling below 1,450 ft. Possibility of a ½-mile southwest extension for the Sikes deep Strawn sand pool 3½ miles northeast of the Hull-Silk pool was seen in Sikes No. 1-A Anderson, J. S. Brook Survey, Abstract 17, which cored sandy shale showing oil from 4,338 to 4,411 ft., and then cemented 7-in. casing at 4,385 ft. for a test.

Archer County's new Caddo lime oil pool, opened last week, was showing favorably as an increase in oil production was noted at the close of the week. Kadane Oil Corp. No. 1 Hemmi, Section 60, Block 3, Clark & Plumb subdivision, 3 miles south of the town of Scotland, after a 16,000-gal. acid treatment flowed 300 bbl. of net oil. It is now shut down with storage full. It is producing from the Caddo lime at 5,164 to 5,284 ft., with total depth being 5,294 ft.

A new shallow oil pool was opened in the central part of Archer County by Ralph C. Hart No. 1 J. D. Carpenter, Lot 38-A, Clark & Plumb subdivision, 6 miles east of Archer City. The well produced 30 bbl. of oil on a 7-hour gage and was given a 60-bbl. potential by the Railroad Commission. Production is from the Thomas sand at 905-07 ft.

In the Nocona pool, Montague County, Rogers & Rogers No. 1 Astley, Jacob Lenow Survey, Abstract 433, one location north of the discovery well, flowed 130 bbl. of oil in 13 hours through ¼-in. choke on 2-in. tubing. Production is from 4,649-69 ft. A southwest offset to this well and a west offset to the discovery well, Stanolind Oil & Gas Co. No. 1 Zachary, in the Lenow Survey, was being completed. The well was producing 7 bbl. of oil hourly from sand from 4,639-52 ft. These two wells make a total of three completions for the field, all of them offsets to each other. Two miles east of Nocona, Sinclair Prairie Oil Co. No. 1 Gould, Section 16, B.B.B.&C. Survey, was drilling below 2,695 ft. This wildcat is 7,000 ft. southeast of the Bridwell Oil Co. No. 1 Reynolds, Section 9, E. T. Survey, which was dry and abandoned in the Ellenburger lime at 5,403 ft.

Clay County lost a chance in a closely watched wildcat, not to mention the significance upon the recent unchecked wildcatting program throughout the county. The failure was L. T. (Bobby) Burns No. 1 Wynn, Block 34, H. Williams Survey, Abstract 704, 2 miles west of the town of Joy. The wildcat also was 6 miles southeast of the pool opened by Mr. Burns several months ago in the Browning lands. Total depth of the abandoned test was 5,202 ft., 202 ft. below its original contract depth. About 5 miles west of the Browning pool considerable interest was shown the Frabor-Hodges and Mid-Union Drilling Co. No. 1 Kinder, Lot 11, Block 2, Clark & Plumb subdivision. Contract depth is 5,000 ft. and the wildcat has logged only slight shows of oil in sand from 4,554 to 4,559 ft. It is drilling below 4,915 ft.

New Wildcat Tests

On a wildcat location 3 miles northwest of the nearest production in the K.M.A. pool, Wichita County, will be another attempt to extend Strawn production into Wilbarger County. Consolidated Oil Co. has staked No. 1-C W. T. Waggoner Estate, SE cor. Section 36, Block 6, H.&T.C. Survey. The location is a mile west of the Wilbarger and Wichita county line and a mile north of the same company's No. 1 G. B. Ancell, NE cor. SE Section 35, same block and survey, which indicated production before it was abandoned last year.

Just west of Wilbarger County, in Hardeman County, Amerada Petroleum Corp. made location for No. 1 J. S. Rice in the NW¼ of Section 81, Block H, W.& N.W. Survey, Abstract 412, 6 miles east of Quanah and 2 miles east of Lake Pauline. Contract depth is reported to be 7,500 ft.

Still farther west, in Cottle County, Magnolia Petroleum Co. spudded to 75 ft. in No. 1 Alice Green, in the John Gregory Survey, extreme northeastern corner of the county.

NORTH TEXAS COMPLETIONS

Archer County

Bailey & Harvey No. 1 Abercrombie, 1,512 ft., dry E. P. Griffin No. 1-A Waggoner, 1,630-69 ft., 56 bbl. E. P. Griffin No. 1 Waggoner B, 1,923 ft., dry.

Baylor County

British American Oil Producing Co. No. 1 Jesse E Cope, 5,598 ft., dry.

Clay County

Ted A. Norwood No. 4 Duncan, 1,178-1,204 ft., 165 bbl. Ted A. Norwood No. 5 Duncan, 1,199-1,219 ft., 100 bbl. Sussex Oil Corp. No. 22 C. J. Shumake, 430 ft., dry.

Cooke County

Cox & Hamon No. 1 K. Neu, 4,912-5,133 ft., 450 bbl. Cree & Hoover No. 1 J. A. Becker, 1,408 ft., dry. Pace Petroleum Co. No. 3 J. K. Walsh, 1,215-22 ft., 10 bbl. M. Staniforth No. 1-A B. Voth, 1,731-57 ft., 175 bbl. Whitfield and others No. 8 B. Voth, 1,811-22 ft., 185 bbl.

Jack County

Federal Oil Co. No. 2 J. Matlock B, abandoned location.

Wichita County

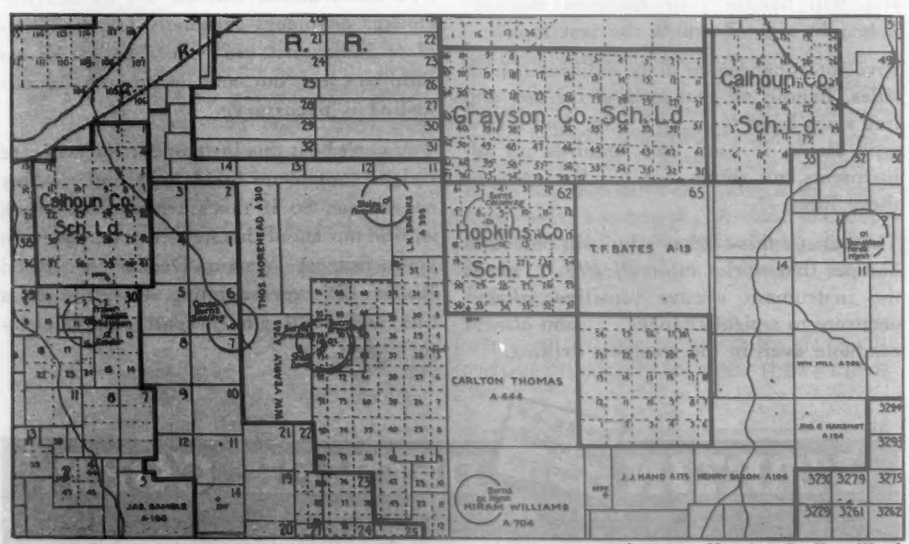
G. G. Browning and others No. 6 C. Guyer, 302 ft., dry. Fisher and others No. 12 C. Birk, 1,589-99 ft., 10 bbl. J. Weilder No. 1 C. Birk, 262-74 ft., 2 bbl. J. Weilder No. 2 Birk, 425 ft., dry. Westbrook Oil Corp. No. 2 L. F. Ramming, 1,372 ft., dry. Fain-McGaha No. 2 E. P. Griffin A, 3,826-35 ft., 856 bbl. Fain-McGaha No. 10 E. P. Griffin B, 3,770-3,811 ft., 1,050 bbl. A. C. Fritz No. 1 H. H. Love, 480-90 ft., 10 bbl. Grace & Wood No. 2 M. A. Love, 3,900-4,028 ft., 1,265 bbl. Hanlon-Buchanan No. 11 Fasset & Tuttle, 3,935-4,001 ft., 1,010 bbl. W. L. Hawkins No. 6 W. T. Waggoner, 701-11 ft., 2 bbl. W. A. Krohn No. 6 Mrs. Grace Jennings, 826 ft., dry. Mitchell Oil Co. No. 2 Sue Mitchell B, abandoned location. Panhandle Refining Co. No. 12 S. B. Burnett, 1,401-17 ft., 15 bbl. R. S. Rathke No. 2 E. H. Rathke, 342-51 ft., 2 bbl. Venmex Oil Co. of Texas No. 4 State Lands, 3,691-3,796 ft., 1,080 bbl.

Wilbarger County

C. F. Kolp No. 6 W. T. Waggoner, 1,208-20 ft., 3,000,000 cu. ft. of gas; old well drilled deeper and plugged back to original pay.

Young County

F.H.E. Oil Co. No. 7 S. R. Jeffery B, 689 ft., dry. Madden and others No. 5 Hugo Kunkel, 1,115-33 ft., 25 bbl. Sparks & Hansen No. 7 Dr. G. B. Hamilton A, 873-90 ft., 15 bbl. Wise & Jackson No. 9 Allen Williams, 655 ft., dry. P. B. Worthington No. 1 Hunt and



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others, 1,159 ft., dry. Conner & Collier No. 1 B. F. Scott, 2,882-3,186 ft., 30 bbl. R. H. Larson No. 1 W. W. Hoggard, 750 ft., dry. Tex-Tor Oil Corp. & McAlester No .1, J F. Knight C. 3,739-44 ft., 585 bbl. in 5 hours.

EASTERN TEXAS

DALLAS, Tex., June 26.—Western Henderson County's Mabank pool had its fourth operation under way as the week closed when Richards & Holloway spudded and arranged to set surface casing in No. 2 Bauguss, 660 ft. southwest of No. 1 Bauguss. The well will be watched as a possible reviver of the area, it having suffered a setback earlier in the week when Tyler & Smith No. 2 Rowe & Baker, 400 ft. west of the discovery well, was dry and abandoned.

Leon County's extension area of the Navarro Crossing pool was in line for another completion as Humble Oil & Refining Co. No. 1 Johnson, nearly a mile northeast of production, prepared to squeeze off the lower perforations in the casing for completion from the oil sand at 5,877-83 ft. Casing is set at 5,903 ft. in water sand. The next well Humble is to drill in this area will be No. 1 Lonzo Campbell, northeast of No. 1 Johnson, and 500 ft. SW of the NW line and 720 ft. NE of the SW line of a 72-acre tract in the William Little Survey.

Grayson County, in the northern part of eastern Texas, lost out in one of its closely watched wildcats. Sinclair Prairie Oil Co. abandoned No. 1 Mollie Williams, in the Richard H. Sowell Survey, 2 miles west of Collinsville. The company plugged the wildcat back from total depth of 4,543 ft. to 3,600 ft. for a test before definitely abandoning the hole.

New Wildcats

Freestone County received two new wildcats while Anderson County counted one new start. The Elkhart area of southern Anderson County, opened for gas production 2 years ago by American Liberty Oil Co., was given promise of a new Woodbine sand oil exploration test when R. H. Williams filed application for a drilling permit in the O. G. Rogers tract in the Greenwood Survey, nearly a mile southeast of the discovery gas well in the area. It is nearly a half mile southwest of a dry hole drilled by the Gulf Oil Corp. on the Rogers land.

Freestone County's new tests were the Brothers Oil Co. No. 1 P.D.C. Ball Estate, M. Rionda Survey, 5 miles northwest of Butler, and the J. R. Bunn No. 1 T. H. Robinson, J. L. Bennett Survey, 4 miles east of Streetman.

EAST TEXAS FIELD COMPLETIONS

(One-hour gages)

Gregg County—Longview Area

Arkansas Fuel Oil Co. No. 15 F. T. Rembert, 3,455-80 ft., 72 bbl. Cities Service Oil Co. No. 25 L. A. Jeter, 3,560-3,630 ft., 76 bbl. Stanolind Oil & Gas Co. No. 17 P. McGeorge, 3,465-3,518 ft., 59 bbl. R. E. Trapp No. 2 R. B. White, 3,490-3,535 ft., 60 bbl. Valley Osage and William Peyton No. 12 T. W. Lee, 3,595-96 ft., 50 bbl.

Gregg County—Kilgore Area

Shell Oil Co., Inc., No. 87 J. B. Watson, 3,515-3,640 ft., 60 bbl. Shell Oil Co., Inc., No. 88 J. B. Watson, 3,516-3,642 ft., 78 bbl.

Rusk County—Joiner Area

L. A. Grelling No. 2 E. L. Pinkston, 3,612-21 ft., 30 bbl.

EAST CENTRAL TEXAS COMPLETIONS

(24-hour gages)

Freestone County

J. R. Bunn No. 1 S. Jeffries, dry and abandoned at 3,958 ft.

Henderson County

Tyler & Smith No. 2 Rowe & Baker, dry and abandoned at 3,194 ft.

Houston County

J. E. Boone No. 1 Humble-Shaw, 1,920-41 ft., 167 bbl. Hinchliffe & Smith No. 2 Joe Gilmore, abandoned location.

Limestone County

W. H. Foster No. 1 J. P. Key, dry and abandoned at 3,020 ft.

Titus County

Humble Oil & Refining Co. No. 2 A. J. Blalock, 4,234-4,343 ft., 428 bbl.

Ohio Fields

(Continued from Page 60)

showing of gas in the Clinton sand at 4,056-89 ft., with a fair showing of oil in the Medina at 4,157-65 ft. The Medina was shot with 30 qt. and the well flowed 70 bbl. in three days.

Perry County, Monroe Township, Thistle Oil Co. No. 4 Henry Weaver, Section 16, shot a small oil showing in the Clinton sand without appreciable results. The sand at 3,744-80 ft. is being tested.

Tuscarawas County, Lawrence Township, Status Development Co. No. 1 Peter Bimeler, Lot 45, gauged 1,650,000 cu. ft. of gas on open flow from Clinton sand at 4,685-4,712 ft.

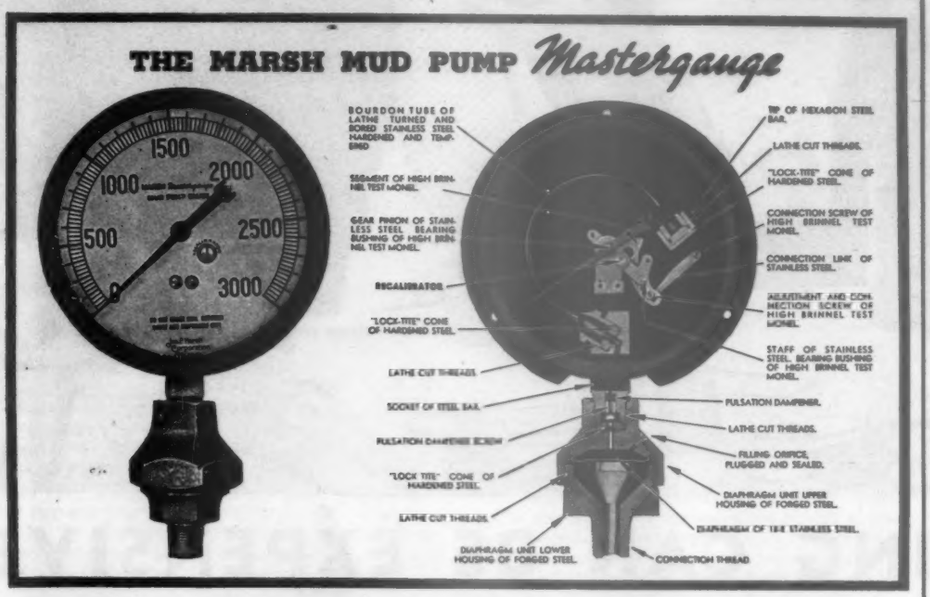
In Washington County, three dry holes and a small gas well were completed. In Barlow Township, Vickers Oil Co. No. 9 Lonnie Perdew, Section 2, was dry, total depth 1,336 ft.; Fearing Township, Lorentz & Seyler No. 1 William Wagner, Lot 103, was dry, total depth 1,108 ft. Ludlow Township, Ewers & Johnson No. 1 J. M. Holland, was dry through the Squaw sand, total depth 1,515 ft. In Ludlow Township, Harry Dickson and others No. 2 O. H. Johnson, Section 22, was dry in the Berea at 1,862 ft. but was plugged back to 1,649 ft. and saved for a small gas well in the Injun and Squaw sands.

Lima Field

In Wood County, Plain Township, Section 13, Sun Oil Co. No. 1 H. E. Cross has resumed operations. A showing of water was had at 2,015 ft. The well is now drilling at 2,055 ft. in 6⅝-in. hole.

In Logan County, Auglaize Township, Henry Vosler No. 1 Nora Ramayer, Section 11, topped the Trenton at 1,174 ft. and drilled in to 1,226 ft. Water drowned out the oil and gas showing after the shot and the hole was abandoned.

In Wyandot County, Tymochtee Township, I. M. Coyle No. 1 Lucy Drumgold, Section 19, was abandoned after drilling 80 ft. in the Trenton, topped at 1,336 ft.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LATHE CUT THREADS
"LOCK-TITE" CONE OF HARDENED STEEL
CONNECTION SCREW OF HIGH BRINNEL TEST MONEL
CONNECTION LINK OF STAINLESS STEEL
ADJUSTMENT AND CONNECTION SCREW OF HIGH BRINNEL TEST MONEL
STAFF OF STAINLESS STEEL BEARING BUSHING OF HIGH BRINNEL TEST MONEL
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Texas and Louisiana Gulf

By NEIL WILLIAMS

Jefferson County, Texas, Is Assured of a New Oil Field

HOUSTON, Tex., June 26.—A new oil field was assured the Texas Coast as Hebert & Smith and others No. 1 L. D. Fontenot, 2½ miles southwest of the North Cheek field and south of the old China prospect, Jefferson County, was in the final stages of completion. Tubing was being run following a drill-stem test which showed pipe line oil. The casing was perforated with 40 shots at 7,875-85 ft., and on a 7½-minute drill-stem test the well flowed pipe line oil and when the drill stem was broken down 13 thribbles of 37.3-gravity oil was recovered. Working pressure at the surface built up to 15 lb. and bottom-hole pressure was 3,000 lb. The well is in the H.T.&B. Survey 17, and has been looked upon as a probable pool opener since the previous week as the result of an electrical survey and side-wall cores, which showed favorable indications in the upper Frio sand at 7,870-7,906 ft. The present test was made after perforations at 7,885-96 ft. were squeezed, at which depth the well flowed oil and salt water.

South of the Lovells Lake field, Jefferson County, Humble Oil & Refining Co. is coring below 7,952 ft. in No. 1-B Steinhagen after the well showed for a distillate producer from a new sand at 7,927 ft. Before the well was killed it flowed at the rate of 2 bbl. of distillate per hour through a ¼-in. choke under a tubing pressure of 1,500 lb.

The West Ranch field, Jackson County, loomed as a major discovery as one outpost test 1½ miles north of production was completed as an oil well in a new sand, and another well on the west side of production was running casing for completion after finding production in the same sand. Lonnie Glasscock No. 1 Mrs. J. H. Drummond, R. Musquiz Survey, flowed 55 bbl. of oil in 16 hours through a ⅛-in. choke under a tubing pressure of 450 lb. and casing pressure 755 lb. The well is flowing from sand at 5,524-43 ft., approximately 325 ft. deeper than the 5,100-ft. sand, which produces in the field proper. The rig is being moved 933 ft. due west for No. 2 Drummond. In view of the fact that this well had only minor showings in the 5,100-ft. sand it was believed to be more closely related to the Vanderbilt field to the northeast. However, at the end of the week, Magnolia Petroleum Co. No. 12-A West, 1,300 ft. due west of the main field and about 2½ miles southwest of the Glasscock producer, topped broken sand at 5,533 ft., and on a 15-minute drill-stem test at 5,531-45 ft., the total depth, recovered 600 ft. of 30.7-gravity oil and tested 31 lb. of working pressure. Seven-inch casing is being cemented for completion. The well defined the 5,100-ft. pay, as salt water was cored at 5,182-92 ft., and the company deepened the hole as the result of the showing made by the Glasscock well.

Continental Oil Co. No. 1 Savage, 3 miles southeast of College Point on the Citrus Grove prospect, Matagorda County, plugged back from a total depth of 5,810 ft. to 4,195 ft., and on a 30-minute drill-stem test through perforated casing at 4,132-42 ft., gave indications of being a dry gas well, and is now shut down waiting for orders.

The Cedar Point field offshore from Chambers County in Galveston Bay was defined on the west as Standard Oil Co. of Texas and Salt Dome Oil Corp. abandoned No. 1-46 State at a total depth of 6,575 ft. An electrical survey and side-wall cores in the Miocene and Frio sand showed nothing of importance. The rig is being moved ½ mile east of production for No. 13-117 State.

In the Martha area, Liberty County, Stanolind Oil & Gas Co. was preparing to test No. 1 Flowers. Five and one-half inch casing was cemented at 8,749 ft., and a drill-stem test was being made after perforating casing at 8,700-05 ft. The Cockfield was topped at 7,960 ft., Discorbis Yeguaensis at 8,050 ft., Eponides at 8,184 ft., and the Cook Mountain at 8,950 ft. Side-wall cores showed salt water sand at 8,525-9,075 ft., and sand and sandy shale with a slight oil and gas odor at intervals from 8,090-8,172 ft., with the lower section having a salty taste.

In the Aldine field, E. C. Hankamer and others No. 1 W. B. Rowland perforated casing at 7,165-70 ft. and is cleaning out flowing wash water and gas with a small amount of distillate through a 5/64-in. choke, under a tubing pressure of 2,050 lb. and casing pressure 1,525 lb. The hole is bottomed at 7,284 ft. with 5½-in. casing cemented on bottom. The well is in the E. Farias Survey, about 1,500 ft. southeast of the discovery well. It checked structurally higher than the discovery producer, but failed to find saturation in the 6,800-ft. sand. As an electrical survey logged sands with slight showings at intervals from 6,600 to 7,200 ft., the well may be killed and other tests made.

Locations for three interesting wildcats were reported. Northwest of the deep production recently opened on the north flank of the Thompson field, Fort Bend County, H. C. Cockburn staked location for No. 1 R. W. Ferries, about 1 mile from production in the H. Chrisman Survey. In the Iowa Colony area, Brazoria County, Rowan Drilling Co. staked location for No. 1 Viven, a 6,500-ft. test in the J. S. Talmage Survey. East of Houston on the Houston County Ship Channel Navigation district, L. R. Wilhite and others let a contract for a 5,000-ft. well between the town of Clinton and the Clinton field in the Ezekiel Thomas Survey.

In the north extension of the Fairbanks field, Harris County, Kirby Petroleum Co. No. 1 Hillebrenner is running casing for completion after a drill-stem test at 6,830-49 ft., recovered an estimated 600 ft. of 37.5-gravity oil and 55 lb. of working pressure. The well is in the Dorsett Survey, about 3,750 ft. southeast of the company's No. 1 Daniels, a distillate producer, which is producing from a lower sand at 7,018-20 ft.

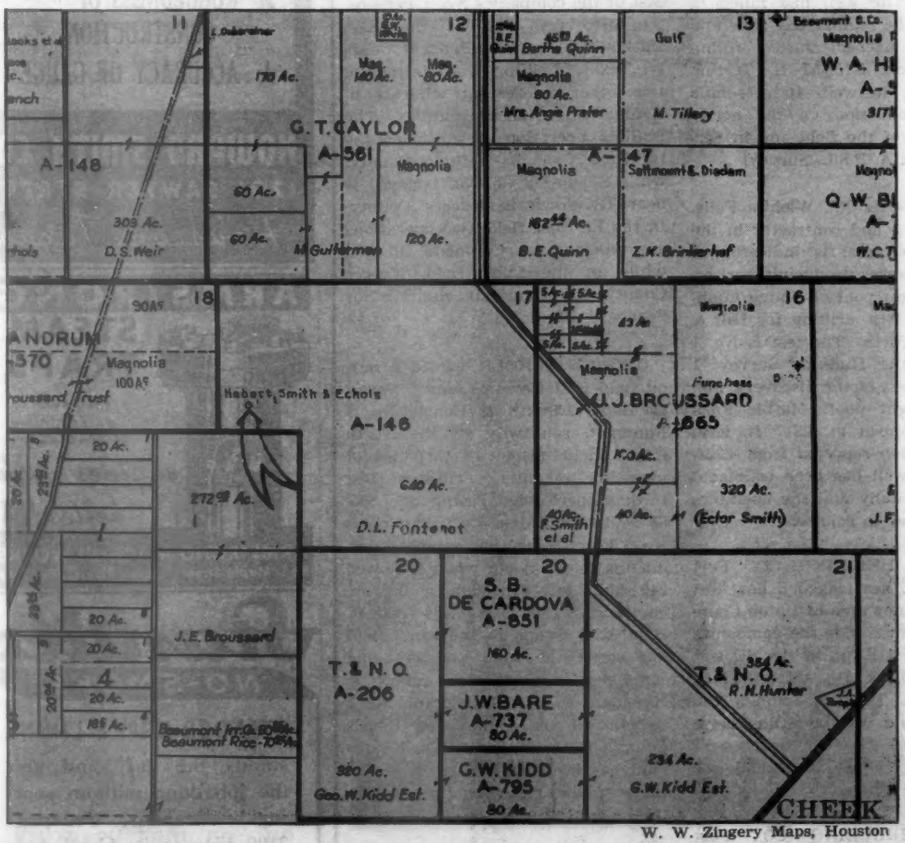
Eola Extension

Along the Louisiana Coast an important extension was being marked up for the Eola field, Avoyelles Parish, by Amerada Petroleum Corp. No. 1 Pierce, three-quarters of a mile northwest of production in Section 6-2s-3e. The Wilcox (Tertiary) sand showing oil was topped at 8,406 ft., and at the end of the week the section had been cored to a depth of 8,576 ft. On top of the Wilcox the well is approximately 25 ft. higher than the discovery well, heretofore the highest in the field. One mile south a location was made by the same company for No. 1 Haas in Section 10-2s-2e. On the east side of the field, Gulf States Exploration Co. No. 1 Haas is bottomed at 8,584 ft., and casing was cemented on bottom after a drill-stem test showed pipe line oil.

In the same parish, and northwest of Marksville, G. C. Koch and others No. 1 Purdy Hess Lumber Co., Section 25-2n-3e, an old well abandoned at 6,054 ft., is being rigged up for deepening to the Wilcox formation. In the same area, location for another deep test was made by Lisbon-Iberia Oil Co. and others for No. 1 Avoyelles Parish Poor Farm in Section 42-2n-4e.

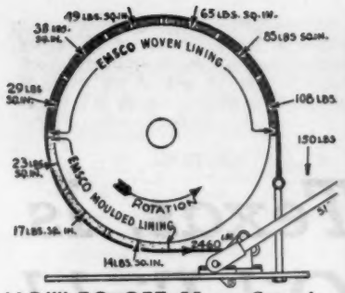
In Beauregard Parish, and located in the Merryville

(Continued on Page 87)



W. W. Zingery Maps, Houston

Hebert, Smith & Echols No. 1 D. L. Fontenot, the discovery well of a new oil field in Jefferson County, Texas



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Among the Drilling

HELMERICH & PAYNE, INC., Tulsa, are completing one test and have staked another on their acreage in the western part of the Denver pool of Yoakum County, West Texas. The operators' No. 1 Coffield, NW¼ Section 797, Block D, Gibson Survey, is being cleaned out from 5,046 ft. to 5,200 ft. after a two-stage acid treatment with 1,500 gal. and 5,000 gal. Their No. 2 Coffield has been staked on the same tract, 660 ft. from the north and east lines of the north half of the northwest quarter of the section.

SOUTH STATES DRILLING CO., Dallas, Tex., is indicating a deeper producing horizon for the North Cowden pool of Ector County, West Texas, at No. 1 Holt which it is drilling for Gulf Oil Corp. The test has been indicating production for the past two weeks from a zone of saturation encountered some 1,000 ft. below the regular pay section of the North Cowden field. Latest reports credit the well with an estimated potential of from 450 to 500 bbl. daily. The well had failed to produce in the regular pay zone and in drilling deeper started filling with oil from 5,155-57 ft. Testing continues at the well. It is ½ mile west of production on the northwest corner of the field and in Section 1, Block A, P.S.L. Survey.

RATHKE OIL CO., Wichita Falls, Tex., operator and contractor in the North Texas area, is indicating a new and deeper producing horizon for the Knight pool of Young County at a test it is drilling for Hill & Hill, Fort Worth. The test is No. 1 Elkins, in the Hudkins Survey, 1 mile southwest of the discovery well in the Knight pool. Marble Falls lime was topped at 4,217 ft. with first saturation reported from 4,221-25 ft. The well has been estimated for 100 bbl. daily and the operators do not intend to acidize.

PARKER DRILLING CO., Fort Worth, Tex., has staked a new test in the McCamey area of Upton County, West Texas. It is the company's No. 1 Richard King, in the SE cor. Section 1, Block 3½, C.C.S.D.&R.G. N.G. Survey. The test is on a 310-acre lease and will be drilled with cable tools to 2,300 ft., unless production is obtained at a shallower depth.

NOBLE DRILLING CO., Fort Worth, Tex., has received contract from Stanolind Oil & Gas Co. for its recently staked wildcat test in Gaines County, West Texas. It is No. 1 J. B. Rayner, northeastern part of the county, SW cor. Section 3, Block C-30, P.S.L. Survey. Twelve-inch hole is to be carried to the top of the lime and should the regular Gaines County horizon prove unproductive, it is understood operators will carry it deeper to the Ordovician.

TWO STATES DRILLING CO., Dallas, Tex., has been given the contract for a new wildcat test in Hardeman County, North Texas. It is Amerada Petroleum Corp. No. 1 J. S. Rice, staked in the NW cor. Section 81, Block H, W.&N.W. Survey, Abstract 412. The location is 6 miles east of Quanah, and 2 miles east of Lake Pauline. Contract depth is 7,500 ft. and it is on a block which has been worked by seismograph.

ALLEN & MORRIS have received contract for a 9,000-ft. hole from Seaboard Oil Co. The well is on the Otto Blumberg lease 1½ miles northeast of the company's No. 1 Persons, the discovery well of the East Mathis field in San Patricio County, Texas. Drilling was started on two other interesting wildcats in Refugio and Nueces counties. The Phillips operation is north of the La Rosa field in Refugio County, while Shield Oil Co. No. 1 Magee is near Robstown in Nueces County. In the La Rosa field, two operations are reported for Coronado Oil Co., while in the Luby field, Nueces County one rotary is running for Seaboard Oil Co.

GEORGE ECHOLS opened a new oil field in Jefferson County, Texas, as Hebert, Smith & Echols No. 1 Fontenot, southwest of the North Cheek field, tested 13 thribbles of pipe line oil on a drill-stem test through perforated casing at 7,865-85 ft. In the University field, Echols No. 1 Evan Duplantier extended production to the north when it flowed 240 bbl. daily through a 5/32-in. choke from sand at 6,494-6,506 ft. His No. 1 Evans in the same field has cored the sand and is being completed, and another rotary is being moved to the field for No. 1 Gebelin. In the Aldine area, Harris County, E. C. Hankamer No. 1 Rowland has been completed for a distillate producer to extend production to the southeast.

GOLDRUS DRILLING CO. is moving in a rotary to Lavaca County,

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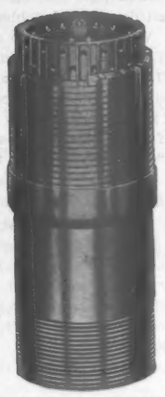
SCREEN

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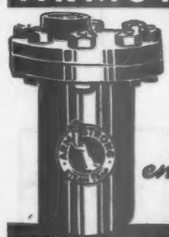
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Contractors

Texas, where a 9,000-ft. Wilcox test will be drilled for W. L. Goldston. The well is on the Turk lease south of Halletsville in the Edwards Survey.

HOUSH & THOMPSON have spudded a wildcat test in the Addick's area, Harris County, Texas. The well is being drilled jointly with Robinson and B. H. Buchanan and is on the L. L. Krey lease in the B. Herra Survey.

CRON & GRACEY are making a series of tests on Continental Oil Co. No. 1 Savage, a wildcat on the Citrus Grove prospect in Matagorda County, Texas. The hole was plugged back from 5,810 ft. to 4,195 ft., and on a drill-stem test through perforated casing at 4,132-42 ft., the well tested dry gas.

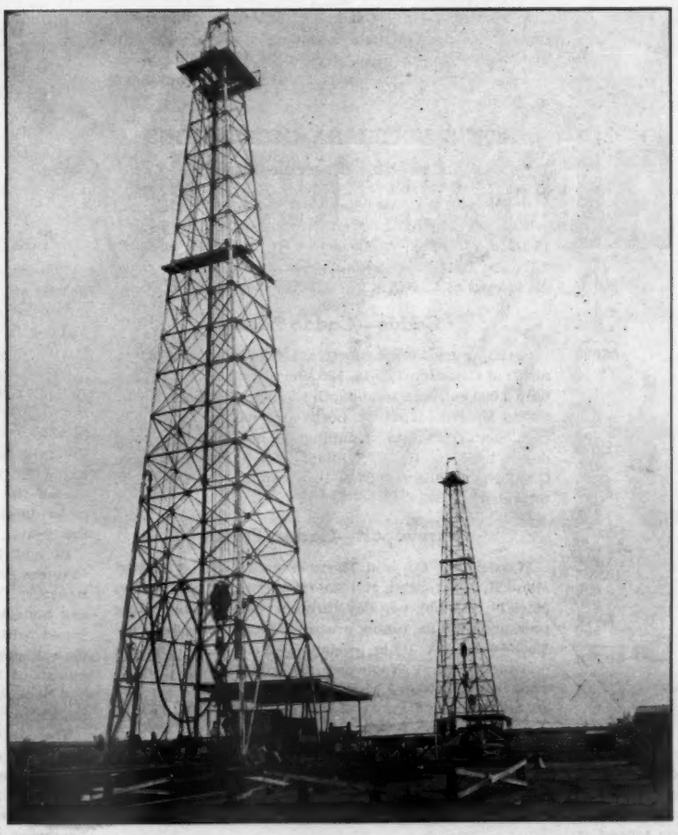
F. H. BROWN, Shreveport drilling contractor, is drilling two wells in the Magnolia field of Columbia County, Arkansas, and one in the nearby Schuler field, all for Phillips Petroleum Co. Two rigs are also active in South Louisiana, one at Eola and one at Woodlawn.

GRAY & WOLFE have received contract from Lisbon-Iberia Oil Co. and others for a Wilcox test in Avoyelles Parish, coastal Louisiana. The well is on the Avoyelles Parish Poor Farm lease, about 2½ miles northwest of Marksville.

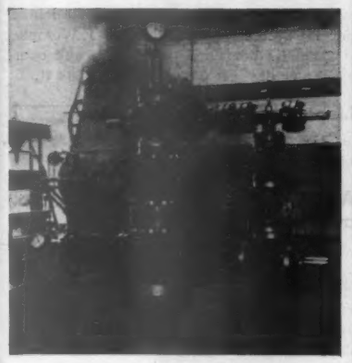
DELTA DRILLING CO. is operating four rigs in the Schuler field of Union County, Arkansas, for Lion Oil Refining Co. at the present time.

ROWAN DRILLING CO. will move a rotary to the Iowa Colony prospect in Brazoria County, Texas, where location was made for the company's No. 1 Vilven in the J. S. Talmage Survey, a projected 6,500-ft. test.

GLENN McCARTHY will move in a large rotary to the Anchor area, Brazoria County, Texas, for a 10,000-ft. test on the J. C. Carr lease in the J. D. Valderas Survey.



Drilling wells in the Avoca townsite portion of the Griffin field, Jones County, West Central Texas



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North Louisiana, Arkansas

By GEORGE WEBER

Extend Magnolia, Ark., Pool 1 Mile West; 500-bbl. Well

SHREVEPORT, La., June 24.—A 1-mile westward extension to the Magnolia field, Columbia County, Arkansas, highlighted the developments of the week's drilling in the Tex-La-Ark district. G. H. Vaughn No. 1 J. Jones, C NE NE Section 21-17-20, topped the Cotton Valley formation at 5,530 ft. and cored into the Buckner formation at 7,419 ft. Smackover lime was topped at 7,457 ft., and first porosity was at 7,497 ft. The hole was drilled to 7,585 ft., taking in 88 ft. of saturation.

In comparison with wells east of it, in the main body of the field, No. 1 Jones topped porosity in the lime about 150 ft. below the structurally highest well in the field. However, with 110 ft. of gas cap at the top of the structure, underlain by 189 ft. of oil-saturated lime, the field may extend several locations west of the Jones well. The outpost is out of the gas cap area, but has about 180 ft. of oil saturation, estimating the water level to be —7,320 ft.

A string of 6-in. casing was set at 7,540 ft. and the well was brought in making an initial production of 16 bbl. per hour through a ⅛-in. choke, tubing pressure 1,100 lb. and casing pressure 1,500 lb. A later gage showed 503 bbl. daily through a 12/64-in. choke, with tubing pressure 1,275 lb. and casing pressure 1,225 lb. The success of this outpost, bringing several hundred acres into proven production, will have a marked effect on drilling in Magnolia, already the tri-state area's most active field.

Production by Pools

Estimated daily gross production all companies week ending June 23, 1939:

NORTH LOUISIANA

	Bbl.
Bellevue	565
Caddo light	4,340
Caddo heavy	2,325
Converse	540
Cotton Valley heavy	60
Cotton Valley light	*13,660
Cross Lake	7,595
De Soto and Red River	1,125
Elm Grove	235
Haynesville	2,910
Holly	85
Homer	2,770
Lisbon	3,050
Pleasant Hill	100
Rodessa	26,935
Sarepta-Carterville	†435
Sligo	1,010
Sugar Creek	240
Urania	2,785
Zwolle	2,820
Total	73,585

SOUTH ARKANSAS

Atlanta	390
Buckner	1,610
Champagnolle	1,405
El Dorado	1,690
Lewisville	105
Lisbon	255
Magnolia	8,465
Miller County	285
Nevada	620
Rodessa	3,975
Schuler	17,580
Smackover light	1,935
Smackover heavy	14,735
Stephens	550
Troy	940
Urbana	1,070
Village	890
Total	56,500

Texas side of Rodessa field, 28,730 bbl. daily.
*4,575 bbl. is distillate.
†185 bbl. is distillate.

Atlantic Refining Co. No. 1 Pine Woods Lumber Co., Columbia County wildcat in the Experiment prospect, C NE NE Section 16-18-22, found the lower Glen Rose, coring the sands corresponding to producing zones at Rodessa, several miles southwest. Gloyd was topped at 4,546 ft., Pettit at 5,140 ft. and the Travis Peak formation at 5,190 ft. The well is being drilled below 5,250 ft., projected for the Smackover lime, which is producing in four Columbia County fields.

Bisteneau Test

In North Louisiana, a lower Marine test in the Bisteneau field of Bienville Parish, Arkansas-Louisiana Gas Co. No. 2 The Gayoso Co., was making a drill-stem test at the week-end, after a reported showing of gas was cored at 8,319 ft. The test will be made at 8,310-8,404 ft. This exploratory well was deepened last week, after testing gas, distillate and salt water through perforations made at 8,110-70 ft. and 8,306-12 ft. Information on the formation tested is being withheld by the operators.

Elsewhere in the parish, Hunt Oil Co. No. 1 T. A. Loe, a 1-mile eastward outpost to the Bear Creek gas field, is drilling below 8,560 ft., and will be closely watched during the next several days.

In Webster Parish, the district's deepest drilling well, Union Producing Co. No. 1 Walker Unit, is making slow progress, drilling shale and lime below 10,315 ft., in the lower Marine section.

East Texas

The border counties of East Texas are active in several sections. The Jefferson-Lodi sector of Rodessa, in Marion County, and the Waskom field of Marion County are the busiest. Arkansas Louisiana Gas Co. No. 1-B Abney tested 1,500,000 cu. ft. of gas at 4,802 ft., in the lower Glen Rose formation, and is drilling ahead.

Cass County has a wildcat getting under way as Red Iron Drilling Co. spuds No. 1 Spearman in the Burnham Survey, 3½ miles southeast of Atlanta. In Shelby County the Joaquin field is adding another test, with material moving in on W. H. Neel No. 1 McDaniel, about ¼-mile northeast of the field's latest test, now shut down in the lower Glen Rose.

NORTH LOUISIANA COMPLETIONS

Bisteneau—Bienville Parish

Arkansas Louisiana Gas Co. No. 1-B Thomas and others, 660 ft. north and 810 ft. west of SE cor. Section 15-16-10, estimated 40,000,000 cu. ft. gas, rock pressure 2,105 lb., total depth 5,300 ft., set 7-in. casing 5,300 ft., perforated at 5,196-5,287 ft., used 8,000 gal. acid.

Caddo—Caddo Parish

C. C. Lowery No. 1 Ledbetter, 1,848 ft. east and 619 ft. north of C Section 7-20-15, 130 bbl. per day, open tubing, used 3,000 gal. acid, total depth 1,593 ft. Texas Co. No. 52 Caddo Minerals, 1,350 ft. north and 400 ft. east of SW cor. Section 23-21-15, pumping 30 bbl. per day, total depth 1,643 ft. R. W. Williams No. 3 Arkansas Fuel, C NW NW SW Section 25-21-16, pumping 15 bbl. per day, total depth 2,305 ft.

Shreveport—Caddo Parish

Wardell Oil Co. and Harry Fotiades No. 1 Robert Mandell, 650 ft. north and 820 ft. west of SE cor. Section 26-18-14, 216 bbl. per day through ½-in. choke, casing pressure 1,050 lb., tubing pressure 800 lb., saturated lime 5,548-56 ft., set 5½-in. casing 5,548 ft. J. P. Driscoll and others No. 1 Woolworth, SE cor. Section 26-20-15, total depth 5,605 ft., used 500 gal. acid, salt water and abandoned.

Vivian—Caddo Parish

Tippert Oil Corp. No. 1 Browning, 1,650 ft south and 330 ft. west of NE cor. Section 33-22-16, total depth 2,851 ft., dry and abandoned.

Bull Bayou—De Soto Parish

C. H. Tuttle No. 3 Wemple, 165 ft. north and 330 ft. west of SE cor. NE SW Section 14-21-11, old well drilled deeper; former De Soto Petroleum Co. No. 1 Wemple, abandoned at 2,590 ft.; deepened to 2,703 ft. and completed for 10 bbl. per day, set 6⅝-in. casing 2,568 ft.

Lisbon—Claiborne Parish

E. T. Oakes No. 1 Frod, C SW NE Section 28-21-5, total depth 3,590 ft., dry and abandoned.

ARKANSAS COMPLETIONS

Magnolia—Columbia County

Atlantic Refining Co. No. 1-E Garrett, C SE NW Section 24-17-20, 22 bbl. hour through ¼-in. choke, tubing pressure 1,100 lb., casing pressure 1,250 lb., total depth 7,640 ft., perforated casing 7,448-74 and 7,488-7,515 ft. Southwood Oil Co. No. 1 J. A. Foster, C NE NE Section 24-17-20, 14 bbl. per hour through 12/64-in. choke, tubing and casing pressure 1,450 lb., total depth 7,554 ft., set 7-in. casing 7,480 ft. G. H. Vaughn and others No. 1 J. Jones, C NE NE Section 21-17-20, 16 bbl. per hour through ⅛-in. choke, tubing pressure 1,100 lb., casing pressure 1,500 lb., total depth 7,562 ft., set 6-in. casing 7,540 ft.

Lewisville—Lafayette County

East Texas Refining Co. and Erwin & Leach No. 1 H. D. Scruggs, C N½ NW SW Section 23-16-24, spudded 10 ft. and abandoned. East Texas Refining Co. and Erwin & Leach No. 1 W. Wright, C S½ NW NW Section 23-16-24, spudded 10 ft. and abandoned.

Wildcat—Miller County

J. K. Wadley and others No. 1 Jacobs Estate, C NW NE SE Section 33-18-26, cored 3,987-4,001 ft., recovering 3 ft. salt water sand and 3 ft. of lime, shale, and sand, dry and abandoned 4,011 ft.

Schuler—Union County

Marine Oil Co. No. 7 fee, C SE NE NE Section 20-18-17,

(Continued on Page 88)

Texas Oil and Gas Since 1543

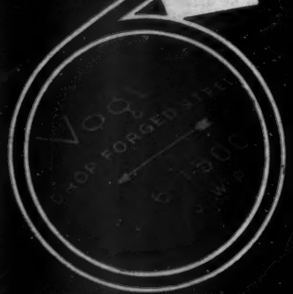
The history and development of the petroleum industry in the nation's biggest state is graphically and authoritatively told in "Texas Oil and Gas Since 1543," a book by C. A. Warner, geologist, engineer and economist of Houston Oil Co. of Texas.

So all-inclusive is Mr. Warner's discussion of his subject that the book might be considered the definitive history of Texas oil to date. The author begins his 487-page book with the statement that "Texas is the real birthplace of the oil industry in America," citing the history of the De Soto expedition to justify use of the year "1543" in the title, and goes on to cover in detail development of the industry through the years.

In addition to general history the work includes chapters on its economic importance, stratigraphy and structure, the major productive regions of the state, and historical documents and records. It is well illustrated with pictures, graphs and maps, and the statistical phase of the industry is taken care of in numerous tables in the back of the book. It is not a dull book of figures and statistics, however, but is an interesting and entertaining piece of writing.

The author plumbed original sources, state and company records, geological surveys, newspapers and other documents containing authoritative information. Numerous informed individuals were interviewed. The book is cloth bound, with a forward by Col. E. O. Thompson of the Texas Railroad Commission, and can be ordered through the Book Department of The Oil and Gas Journal, at $5 a copy.

Your best GUARANTEE for VALVE TOUGHNESS ENDURANCE and SAFETY



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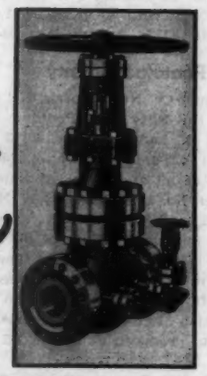


BRANCHES; NEW YORK PHILADELPHIA CLEVELAND CHICAGO KANSAS CITY DALLAS

HENRY VOGT MACHINE CO., INCORPORATED, LOUISVILLE, KY.

Oklahoma Operations

By
DAL DALRYMPLE

Important Tests in Various Counties Are Yet Uncertain

The Lexington area in Cleveland County will receive another deep-sand test. Sinclair Prairie Oil Co. announced on Saturday it would start a wildcat in SE SE SE Section 30-7n-1e, northeast of the town of Lexington. The company began taking leases in Townships 7n-1e and 7n-1w last fall and other companies got into the play until leases got as high as $80 an acre. East of Lexington the Hall Briscoe test No. 1 Mantooth, NW NW NW Section 24-6n-1e, was drilling below 4,450 ft. and was checking about 350 ft. higher than the old Peckham and others No. 1 Harris in Section 20-6n-1e. Nels Burton and others No. 1 Boggs, NE NE SE Section 16-9n-2w, north of Norman in Cleveland County, which plugged back from 7,646 ft. to 7,500 ft., set pipe in Simpson dolomite at 7,375 ft., was getting ready to test that formation.

Carter Oil Co. No. 1 Staggers, C W½ SE NW Section 4-25-3w, Grant County, north of the Lamont field, was drilling below 5,440 ft.

Pure Oil Co. in its No. 1 Noble wildcat in C NE Section 33-3s-1w, Carter County, has decided to abandon the Hunton lime as unproductive and to test the upper formations. Hunton was had from 4,638 to 4,737 ft. but failed to produce. This test was originally drilled to 8,500 ft.

W. A. Delaney has started a test in NW NE NE Section 17-5-9, in Hughes County. In the same county Phillips Petroleum Co. wildcat in C SE NW Section 8-5-10 was 5 ft. in the Viola lime at 5,573 ft.; plug has been drilled and the test will be finished with standard tools.

Completions in all fields are given below. They do not include any unusual producing wells.

Stephens County

Pace No. 1 Noble, C NE SE Section 3-2s-8w, Duncan district, is a 6-bbl. well at 2,214-21 ft.

Cities Service Oil Co. No. 1 Miller, NE NE NE Section 5-2s-8w, pumped 50 bbl. of oil and 50 bbl. of water from sand at 2,244-48 ft.

Carter County

In the Healdton field in Carter County, Sinclair Prairie Oil Co. No. 25 Loman, NW cor. SW SE Section 9-4s-3w, was shot with 40 qt. at 979-1,017 ft., and with 50 qt. at 1,106-41 ft., and made a 20-bbl. well.

Pontotoc County

Phillips Petroleum Co. No. 1 Norris, NE SE SW Section 25-2n-6e, in the Fitts pool, Pontotoc County, old total depth 4,255 ft., had McLish at 4,275 ft.; lime at 4,355 ft.; sand at 4,363 ft.; lime at 4,375-4,430 ft. It produced 39 bbl. of oil and 3 bbl. of water when recompleted. Cooper No. 1 McKinely, NW NW NE Section 23-2n-7e, had sand at 1,343-70 ft., shot it with 40 qt. and the well pumped 154 bbl. of oil in 19 hours. Later it pumped 99 bbl. in 20 hours. Same operator's No. 3 McKinely missed the sand and was abandoned as dry at 1,403 ft. Moore and others No. 1 Mitchell, NW SW NW Section 31-2n-7e, was deepened from 4,515 ft. to 4,559 ft. and produced 64 bbl. of oil and 30 bbl. of water.

In the Beebe pool in Pontotoc County, Senora Oil & Gas Co. No. 1 Porter, NE NE NE Section 35-5n-4e, set 7-in. casing at 2,402 ft., total depth 2,513 ft., acidized with 3,000 gal. and pumped 90 bbl.

Pottawatomie County

Associated Oil Co. No. 5 Schrader, SW SW NE Section 6-6n-5e, topped dolomite at 4,102 ft., total depth 4,222 ft., acidized with 3,000 gal., and then with 4,000 gal., flowed 200 bbl. of oil and 1,800 bbl. of water. Denver Producing & Refining Co. No. 2 Stearns, NW NE NW Section 6-6n-5e, dolomite topped at 4,075 ft.; set 7-in. casing at 4,084 ft., total depth 4,183 ft., acidized with 5,000 gal., pumped 350 bbl. of oil and 1,550 bbl. of water. Denver Producing & Refining Co. No. 3 Stearns, SE SE NW Section 6-6n-5e, Viola lime at 4,000 ft., total depth 4,210 ft., acidized with 6,000 gal., pumped 2,400 bbl. of water and was plugged back to 4,181 ft., where it was to be tested.

Sunray Oil Co. No. 4 Swan, SE SE SE Section 12-6n-5e, had dolomite top at 3,733 ft., total depth 3,790 ft. It was acidized with 3,000 gal., swabbed 50 bbl. of oil in 10 hours, and was to be put on the pump.

Alma Oil & Gas Co. No. 1 Johnson, SW NW SW Section 19-6n-5e, total depth 4,062 ft., 37 ft. in second Wilcox sand; pipe was perforated at 2,890-2,930 ft. and the well flowed 110 bbl. in 24 hours, and was shut in awaiting a pipe line connection.

Keriyn No. 1 School land, NW NW NE Section 36-7n-3e, had Viola lime at 4,220-36 ft., and pumped 400 bbl. in 24 hours. The oil was cut 30 per cent with water. The well was not yet a completion.

Sinclair Prairie Oil Co. No. 3 Nealy B, SE SE SW Section 25-7n-4e, had dolomite at 4,148 ft., total depth 4,249 ft. It was acidized with 5,000 gal. and flowed 276 bbl. of oil and 25 bbl. of water.

Oklahoma Oil Co. No. 1 Thomas, SE SW SE Section 29-7n-4e, dolomite at 4,200-41 ft., total depth; acidized with 4,500 gal.; the response being unsatisfactory and the hole was drilled to 4,306 ft. and acidized with 5,000 gal. It pumped 109 bbl. of oil and a large volume of water. It was not yet a completion.

Sinclair Prairie Oil Co. No. 3 Myer, NE SE SE Section 32-7n-4e, drilled to the Wilcox sand at 4,308-12 ft., which was barren, but the dolomite at 4,288-4,312 ft. proved a light pay and the well pumped 42 bbl. of oil and 20 bbl. of water.

Berkey No. 1 Lawther, NW NW SE Section 33-7n-4e, was dry and abandoned in Wilcox sand at 4,485-93 ft.

Tex-Oil Producing Co. No. 5 Bean, NE SW NW Section 19-7n-4e, had dolomite top at 4,155 ft., total depth 4,255 ft. It was acidized with 5,000 gal. and produced 40 bbl. initially.

Phillips Petroleum Co. No. 6 Youts, SE SE SW Section 19-7n-4e, old total depth 4,137 ft., was plugged back to 3,536 ft. and redrilled and is producing 70 bbl. of oil from dolomite at a total depth of 4,080 ft.

Magnolia Petroleum Co. No. 1 Fyke, NE NE NW Section 28-7n-5e, drilled to dry Wilcox sand at 4,225-29 ft., and plugged back to 4,210 ft. and acidized in dolomite topped at 4,093 ft. with 2,000 gal. It swabbed only 4 bbl. of oil, and was abandoned as dry.

Max Westheimer No. 2 Everitt, SW SW NW Section 32-7n-5e, topped dolomite at 4,096 ft., total depth 4,188 ft. It was acidized with 9,000 gal. and swabbed 340 bbl. of oil and 20 bbl. of water.

Seminole County

In the Dora field, in Seminole County, D. B. Malernee No. 4 Swan, NW NE SW Section 33-7n-6, set 7-in. casing at 2,862 ft., total depth 2,952 ft., shot with 100 qt. at 2,921-39 ft., pumped 105 bbl. of oil.

In the Maud district, Portable Oil Co. No. 1 Eddy, NW NW NE Section 21-8n-5e, an old well deepened to Wilcox sand at 4,275-77 ft., pumped 16 bbl. of oil and 50 bbl. of water.

In the Rosanna pool, Rogers No. 1 Robeson, SW SW SE Section 36-8n-7e, deepened from 3,140 ft. to Cromwell sand at 3,429-36 ft., showed only mud on a drill stem test. Pipe was perforated at 3,116-60 ft. and the well produced 20 bbl. of oil and 16 bbl. of water.

In the north Yeager field, in Hughes County, Davon No. 1 Hurley, C N½ SE NW Section 5-8n-10e, old total depth 3,155 ft., was deepened to Hunton lime at 3,840-80 ft., total depth. Casing was perforated at 3,850-80 ft. and the well showed an initial prdouction of 25 bbl. of oil and 750,000 cu. ft. of gas.

In the Seminole City area, Seminole County, White No. 1 Killingsworth, NW NE SW Section 14-9-6, was dry and abandoned in Wilcox sand at 4,077-81 ft., but before it was abandoned casing was ripped and sands at several upper levels tested.

Kitchell No. 1 Lucas, NE SE NW Section 13-9-9, was dry and abandoned at 1,490 ft.

Olsen No. 2 Gillis, SW NW NW Section 5-10-4n, Shawnee field, Pottawatomie County, had Earlsboro sand at 4,417 ft., set 7-in. casing at 4,410 ft., and drilled to 4,448 ft. The well flowed 224 bbl. of oil in 6½ hours. It was not completed.

Carter Oil Co. No. 1 Bruner, C E½ NW SW Section 2-10-6, in the Searight district, deepened from 4,156 ft. to 4,236 ft. and was abandoned after the hole filled with water.

Burke Greis Oil Co. No. 1 Scott, C NE SW Section 20-10-10, Okfuskee County, was a 7,500,000-cu. ft. gas well. It had gas sands at 2,482-3,518 ft., 2,690-2,702 ft. and 2,747-50 ft.

Estimated Daily Production

Estimated daily production for Oklahoma for the week ending June 24, and for the preceding week, was as follows:

	Barrels	
	June 24	June 17
Allen	7,125	6,025
Billings	6,375	6,550
Burbank	7,650	7,825
South Burbank	9,325	9,300
Balance Osage	17,500	17,250
Blackwell district	3,675	3,650
Bristow-Slick	6,800	6,825
Chandler	1,500	1,525
Crescent	3,050	3,225
Cromwell	3,125	3,000
Cushing-Shamrock	9,775	9,800
Duncan	4,275	3,850
Edmond	5,500	4,875
Fish	5,150	4,550
Fitts	26,225	25,500
Jesse	2,550	2,375
Graham-Fox	3,900	3,825
Gray	900	875
Healdton	9,175	9,100
Hewitt	4,050	3,825
Keokuk	3,625	3,650
Konawa	1,225	1,200
Lucien	9,125	9,225
Moore	2,850	2,775
Oklahoma City	108,125	110,775
Olympic	3,100	2,850
Ramsey	4,500	4,350
Sasakwa	1,375	1,325
Sholem-Alechem	2,850	2,350
Seminole district:		
Bowlegs	8,600	8,200
Carr City	2,975	2,875
Dora	3,600	3,575
Earlsboro	5,125	4,675
South Earlsboro	550	550
East Earlsboro	4,100	4,150
Little River	7,300	7,225
East Little River	775	725
Maud	750	850
Mission	1,550	1,525
Seminole	8,350	8,125
East Seminole	1,375	1,350
Searight	2,550	2,525
Total Seminole	47,600	46,350
St. Louis-Pearson	36,750	36,250
Tatums	2,075	1,700
Tonkawa-Garber-Thomas	4,125	4,075
Wewoka	2,225	2,025
Yale-Jennings	3,575	3,525
Other pools	88,000	87,500
Total Oklahoma	458,750	453,475

Lincoln County

In the Sac and Fox pool, in Lincoln County, H. F. Wilcox Oil & Gas Co. No. 29 Sac and Fox, NW SE SW Section 15-14-6, was shot with 95 qt. in Prue sand at 2,965-3,041 ft., and flowed 68 bbl.

Okmulgee County

Newblock No. 4 Robbett, NW NW NW Section 36-15-12, Okmulgee County, is a 1,000,000-cu. ft. gasser at 1,560-90 ft.

(Continued on Page 88)

Southwest Texas District

By F. L. SINGLETON

Minnie Bock Field, Nueces County, Getting Good Play

CORPUS CHRISTI, Tex., June 26.—Development of the newly opened Minnie Bock field (North Ciara Driscoll), Nueces County, was holding the attention of operators in the Southwest Texas district as one outpost well, 2,100 ft. northeast of production, was preparing for a production test, and drilling was started on several other important locations.

Texas Conservative Oil Co. No. 1 Bruni Bock, Section 44, northeast of the discovery well, cored 32 ft. of oil sand at 3,800-32 ft., and drilled additional sand to a total depth of 3,840 ft. An electrical survey was made and casing is being cemented. The sand was topped approximately 6 ft. higher than in the discovery well. This well is approximately midway between the discovery and the same company's No. 1 J. E. Humble, which is drilling below 4,600 ft. in hopes of encountering a deeper sand. Shaly sand with an oil odor was logged at 3,817-18 ft., and hard sand with thin soft streaks carrying an odor of oil at 3,829-30 ft. On top of the sand the well is running about 25 ft. low, and the amount of sand encountered is not capable of producing.

In the main field, offsetting the discovery well to the north, Texas Conservative Oil Co. No. 1-B Bock perforated casing at 3,809-17 ft., and was completed for an initial production of 118 bbl. daily flowing through a 5/32-in. choke. Locations for three more wells were announced. Phillips Petroleum Co. is moving in material for No. 1 A. C. Gandy, Section 55, just north of No. 1-B Bock. Northwest of Texas Conservative Oil Co. No. 1 Humble, Reed & Cox staked location for No. 1 J. S. Ruegg, in Section 45, while J. D. Manley and others made location for No. 1 J. S. Ruegg in the same section.

9,000-Ft. Wildcat

Location for a 9,000-ft. test, 1½ miles northeast of the discovery well in the East Mathis field, San Patricio County, was made by Seaboard Oil Co. for No. 1 Otto Blumberg in the NE¼ of Section 13, Paul's subdivision of the Welder ranch. East Mathis was opened 2 weeks ago by the company's No. 1 Persons, which has been flowing approximately 41 bbl. daily through a ¼-in. choke. Tubing pressure is 310 lb. and casing pressure 610 lb. The completion was made through perforated casing at 5,260-68 ft.

In the same county, about 2,000 ft. southwest of production in the East White Point field, Republic Natural Gas Co. completed No. 21 Dunn for an initial production of 102 bbl. daily, flowing through a 7/64-in. choke under a tubing pressure of 900 lb. and casing pressure 1,075 lb. Production was obtained by perforating casing 5,593-5,608 ft. The completion joins the southern part of the old White Point gas field, and the main field, and pushes production toward Corpus Christi Bay, where location was recently made by Sinclair Prairie Oil Co. for No. 1 State, in Tract 707.

In Jim Wells County and located in the Reynolds area, Texas Gulf Producing Co. No. 1 Miller was scheduled to be recompleted after it flowed 8 bbl. of oil per day through a 7/64-in. choke under a casing pressure of 2,000 lb. and tubing pressure 1,525 lb. The well was completed through perforated casing at 5,143-49 ft. in the top of 6 ft. of oil sand logged at 5,145-65 ft. In view of the high gas-oil ratio the perforations will be squeezed off and the casing reperforated at a lower level.

In the Ben Bolt field, additional development was being started as the second well was placed on production, and a well north of the discovery had cored pay. Earl Calloway and others No. 1 Smith, an east offset, perforated casing at 5,240-46 ft., and flowed at the rate of 150 bbl. daily through a ½-in. choke. Bridwell Oil Co. No. 1 Beasely cored oil sand at 5,215-60 ft. and is testing through perforated casing. The thick sand section cored in the two wells makes this pool loom as the most attractive area opened along the Frio-Vicksburg trend since the discovery of the South Alice field.

Water-White Distillate

In the Camada field H. H. Howell No. 1 Hoffman was completed for an initial production of 1½ bbl. of water-white distillate per day, flowing through a ¼-in. choke under a tubing pressure of 425 lb. and casing pressure 650 lb. The well was drilled to a total depth of 7,041 ft. and completion was made by perforating casing at 5,535-40 ft. One mile north of the discovery well, Tom Graham No. 1 Mull was abandoned as dry at a total depth of 7,014 ft.

In the South Alfred field, Lewis Production Co. No. 2 Adams, 660 ft. north of the discovery well, cored soft sand showing oil at 4,670-82 ft., total depth, and casing is being cemented for completion. A drill-stem test of the section was a failure.

Humble Oil & Refining Co. No. 3 Laura Thomson, southwest of Woodsboro, continues to hold interest as additional showings of oil and gas are logged. Sand showing oil and gas was cored at 6,156-59 ft. and shaly sand with an oil odor at 6,161-64 ft. Two drill-stem tests were attempted, but the seat of the testing tool failed to hold, and the well is drilling ahead.

In the Richard King field, Nueces County, Southern Minerals Corp. added another producer to the recently opened deep sand as No. 2-A King was flowing pipeline oil while cleaning out at 5,394-5,402 ft.

Seaboard Oil Co. No. 2-A LaPrelle, the second well drilled in the North Luby field, Nueces County, recovered 660 ft. of salt water in the discovery horizon at 4,355-61 ft., and was abandoned. Rig is being moved in for No. 3-A LaPrella, northwest of the discovery well.

Production from a deeper sand in the Longhorn field, Duval County, was in the making as M. M. Miller & Sons prepared to completed No. 8 fee, after coring sandy shale with an oil odor at 5,515-27 ft. and oil sand at 5,527-35 ft. Sand and shale was cored at 5,535-51 ft., total depth, and 5½-in. casing was cemented on bottom.

In Webb County and located 1 mile east of the West Cole field, Magnolia Petroleum Co. No. 5 Volpe-Benavides, discovery well of the Volpe field, was placed on the pump, and in 12 hours produced 50 bbl. of oil from the Mirando sand at 2,458-66 ft. While this test was being equipped for pumping, location was made by the same company for No. 6 Volpe-Benavides, and at the end of the week oil sand had been cored at 2,466-73 ft., the total depth, and 7-in. casing was cemented at 2,466 ft.

SOUTHWEST TEXAS COMPLETIONS IN PROVEN FIELDS

Aransas-San Patricio Counties

McCampbell field: Corgey & Grote No. 2 King, 7,140 ft., 200 bbl., ¼-in. choke. Corgey & Grote No. 1-B Scrivner, 7,150 ft., 200 bbl., ¼-in. choke. Corgey & Grote No. 1 Smallshaw, 7,150 ft., 200 bbl., ¼-in. choke. Kepley Production Co. No. 1 Unit 58, perforated casing 7,135-42 ft., 194 bbl., ¼-in. choke. Landrum & Jones Oil Co. No. 3 Conn Brown, perforated casing 7,126-30½ ft., 200 bbl., ¼-in. choke. Rantex Oil Co. No. 1 Wheeler, perforated casing 7,136½-43½ ft., 250 bbl., ¼-in. choke. Nueces Royalty Co. No. 2 Nelson, perforated casing 7,082-85 ft., gas well.

Duval County

Benavides field: Hiawatha Oil & Gas Co. No. 1 Southland Life Insurance Co., perforated casing 4,750-58 ft., 127 bbl., 5/32-in. choke. Cedro Hill field: Magnolia Petroleum Co. No. 10 Duval County Ranch Co., sand 1,436-40 ft., 19 bbl., 16 hours, jetting. Fitzsimmons field: Sun Oil Co. No. 15 Brueggemann, perfroated casing 4,265-87 ft., 115 bbl., 9/64-in. choke. Hoffman field: Continental Oil Co. No. 8 Collings, 2,680 ft., 30 bbl., pumping. Longhorn field: M. M. Miller & Sons No. 9 fee, perforated casing 4,050-64 ft., 204 bbl., 5/32-in. choke. Piedra De Lumbre field: Humble Oil & Refining Co. No. 5-E Duval County Ranch Co., 2,118 ft., 2 bbl., pumping. Humble Oil & Refining Co. No. 6-E Duval County Ranch Co., 2,111 ft., 77 bbl., in 3 hours, ½-in. choke. Magnolia Petroleum Co. No. 27 Duval County Ranch Co., 2,060 ft., 520 bbl., ⅝-in. choke. S. R. C. field: Transwestern Oil Co. No. 22 Duval County Ranch Co., sand 1,046-54 ft., 35 bbl., pumping.

Guadalupe County

Darst Creek field: Camp Oil Co. No. 4 Malaer, 2,619 ft., 50 bbl. oil, 75 bbl. water, pumping.

Jim Wells County

South Alice field: Atlantic Refining Co. No. 1-B Bankers Mortgage Co., 5,365 ft., 171 bbl., ½-in. choke. W. D. Walton and others No. 2 Bankers Mortgage Co., perforated casing 5,330-54 ft., 140 bbl., ½-in. choke.

Live Oak County

Oakville field: Loma Oil Co. No. 1 F. L. Church, 2,855 ft., abandoned.

McMullen County

South Calliham field: Strigel Richardson No. 1 Schroeder, 1,607 ft., abandoned.

Medina County

Dunlay field: D. W. Richardson No. 1 Zuberbueler, 458 ft., abandoned.

Milam County

Rockdale field: W. A. Jones No. 7 Coffield, 694 ft., 4 bbl., pumping.

Nueces County

Ciara Driscoll field: Baltic Drilling Co. No. 1 Shary, perforated casing 5,649-59 ft., 85 bbl., ¼-in. choke. R. B. Bryant No. 3 Galvan, perforated casing 5,407-17 ft., 70 bbl., 3/32-in. choke. R. B. Bryant No. 4 Galvan, perforated casing 5,596-5,601 ft., 50 bbl., 3/32-in. choke. O. W. Killam No. 2 Holmes, perforated casing 5,560-81 ft., 140 bbl., ½-in. choke. Luby field: Seaboard Oil Co. No. 43 Luby, perforated casing 4,344-48 ft., 100 bbl., ½-in. choke. Saxet field: Southern Minerals Corp. No. 6 Mason, perforated casing 6,892-95 ft., 80 bbl., 7/64-in. choke. Texas Gulf Mineral Corp. No. 1 Humphries, perforated casing 5,758-62 ft., 100 bbl. distillate, ½-in. choke.

Refugio County

Fox field: Union Producing Co. No. 22 Fox, 6,461 ft., 349 bbl., ¼-in. choke. La Rosa field: Coronado Corp. No. 15 Rooke, perforated casing 5,900-03 ft., 151 bbl., ½-in. choke. Coronado Corp. No. 30 Rooke, 6,136 ft., abandoned. Refugio field: W. F. Morgan No. 5-A Mitchell, perforated casing 6,240-45 ft., 29 bbl. distillate, ¼-in. choke.

San Patricio County

East White Point field: Plymouth Oil Co. No. 4 Sparks, perforated casing 5,644-64 ft., 133 bbl., 7/64-in. choke. R. A. Welch No. 4 fee, perforated casing 5,647-51 ft., 116 bbl., 9/64-in. choke.

Victoria County

McFaddin field: Barnsdall Oil Co. No. 30 McFaddin, 4,409 ft., 151 bbl., ¼-in. choke.

(Continued on Page 83)

Wasson-Bennett District Is Most Active in West Texas

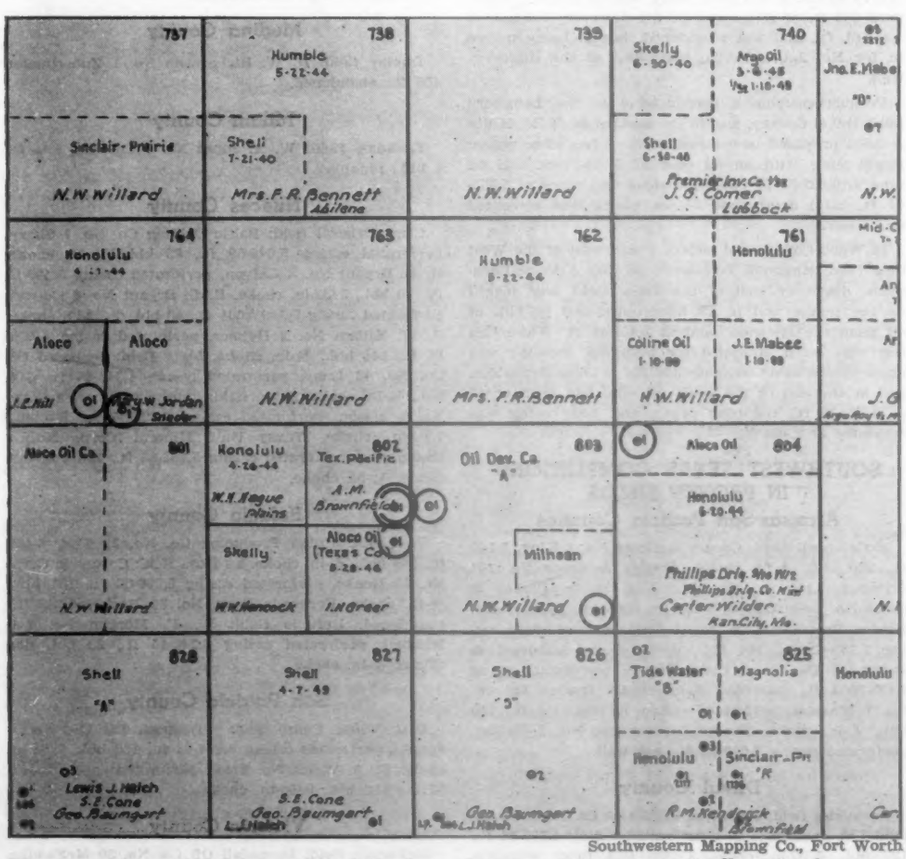
By
D. H. STORMONT

FORT WORTH, Tex., June 26.—By far the most active area in West Texas during the past week was that which, less than six months ago comprised some 5 miles in width and separated the Wasson and the Bennett fields of Yoakum County. Development has been steady in the district for the half year and as a consequence there seems to be little possibility left that the pools are on separate structures. Some two and a half months ago Texas Pacific Coal & Oil Co. completed No. 1 A. M. Brownfield, NE¼ of Section 802 for 928 bbl. of oil per day. Since the completion of this well Aloco Oil Co., Dallas, Tex., has obtained several farmouts, and is drilling one test which will bear watching until its completion. There are two other tests in the area drilling below 4,800 ft. and four locations are awaiting commencement.

Aloco Oil Co. No. 1 Mary Jordan, SW SE Section 764, is drilling below 4,891 ft. in lime. As a west offset to this test, the same company has staked No. 1 J. E. Hill. In the NW¼ Section 803, Oil Development Co. of Texas is drilling below 4,820 ft. in No. 1-A N. W. Willard, east offset to the Texas Pacific Coal & Oil Co. No. 1 Brownfield, producer. About a mile southeast of Oil Development Co.'s test, Milhoan Production Co. is drilling below 4,880 ft. in No. 1 N. W. Willard, extreme SE¼ of Section 803. Among the recent locations are Mid-Continent Corp. No. 1 J. G. Comer, center of the north 160 acres of Section 760, ½ mile south outpost to the Bennett field; Aloco Oil Co. No. 1 I. N. Greer, NE SE Section 802, ½ mile south of the No. 1 Brownfield producer; Aloco Oil Co. No. 1 Wilder, NW NW Section 804, 1⅛ miles east of No. 1 Brownfield.

Also in the northern basin area but in Cochran County, T. G. Shaw No. 1 Carrie S. Dean, opening a new pool in the eastern part of the county, has been given a final Railroad Commission gage. The well flowed 402 bbl. of oil by heads in 24 hours from a total depth of 5,002 ft. in lime. The test, which has been in the process of completion for several weeks, is 1½ miles north and slightly west of the Dean pool and 4 miles northwest of the Duggan pool. It is in Labor 7, League 94, Mills County School Lands.

New and deeper pay in the southern part of the Permian basin has been definitely assured at Gulf Oil Corp. No. 1 Holt, ½-mile west outpost to the north end of the North Cowden pool of Ector County. The well indicated commercial production in the deeper horizon last week, but an increase in water was noted as it drilled deeper. The water has been successfully disposed of and as the week closed the well was estimated good for 450 bbl. daily from the section of saturation encountered from 5,155-57 ft., some 1,000 ft. below the regular pay of the North Cowden field. Test is located in Section 1, Block A, P.S.L. Survey. Several other tests in the county attracted considerable attention as new producing areas were indicated. Barnes, Conkling & White No. 1 E. R. Thomas Estate, Section 28, Block 45, T.&P. Survey, is under negotiations which will carry it deeper to the pay zone found by Gulf Oil Corp. No. 1 Holt. No. 1 Thomas has been attempting production from the regular pay horizon, but operators are of the opinion that greater production is to be found in the new 5,150-ft. horizon. Sloan & Zook No. 1 Johnson, Section 34, Block 43, T.&P. Survey, wildcat test 1½ miles northwest of the discovery well in the Johnson area of Ector County, is drilling ahead below 3,965 ft. after checking 42 ft. higher on the top of the Brown lime than the Johnson area discovery well.



Southwestern Mapping Co., Fort Worth

Wasson pool and Bennett pool of Yoakum County are now practically joined as one, as evidenced by the activity in the "between" area at present

Schleicher County

Interest in Schleicher County is at a high pitch as a result of the discovery of two oil pools within three weeks. The first pool was opened by Lone Star Gasoline Co. No. 1 Bert Page, Section 30, Block 1, G.H.&S.A. Survey, ⅞ mile southeast of a gas well in the what had been classified a gas and distillate pool. No. 1 Page was last reported to have flowed 259 bbl. of oil in 24 hours from the lower Strawn formation at 5,727-46 ft.

The other pool opener for the county is Harold B. Opp No. 1 J. T. Jackson, 4 miles northwest of Eldorado and in Section 41, Block LL, G.H.&S.A. Survey. No. 1 Jackson has casing set on bottom at 4,061 ft., with the bottom joint perforated and a wall packer above the perforations to seal the hole from that point up to 3,280 ft. where 8¼-in. casing was set. Pay was topped at 4,049 ft. in the Cisco lime. The well had 2,115 ft. of oil in the hole when casing was run. The operator has plans for another test on his 3,200-acre block, the second having been contracted to the deeper zone of production found in the county by Phillips Petroleum Co. No. 1 J. A. Whitten, 1 mile north and slightly west of No. 1 Jackson. The deeper zone was found from 4,905 to 4,915 ft.

WEST CENTRAL TEXAS

New and deeper producing horizon for the Knight pool in Young County, together with development in the Ivy and Griffin pools of Shackelford and Jones counties, respectively, led the results of a busy week in the West Central Texas district.

Second pay section for the Knight pool in Young County was reported for the Hill & Hill No. 1 Elkins, in the Hudkins Survey, 1 mile southwest of the discovery well in the Knight pool. The outpost is being drilled by the Rathke Oil Co. of Wichita Falls. The Marble Falls lime was topped at 4,217 ft. with first saturation encountered from 4,221-25 ft. The well probably will make between 75 and 100 bbl. of oil daily on initial tests, it was estimated. Operators do not intend to acidize it at the present time or until it is unable to make its allowable.

Another extension for Shackelford County's spreading Ivy pool was indicated when the outpost being drilled by Algord Oil Co. in the Swenson lands, three-quarters of a mile northwest of the discovery well, cored 3 ft. of saturation in the Palo Pinto lime from 3,160-63 ft. Casing has been set for completion. The company has staked another outpost location, it being in the SW¼ of Section 158, and some 800 ft. southwest of the prospective new producer. The new outpost is No. 3 Swenson.

In the Griffin pool of Jones County, Ungren & Frazier No. 4 Culwell, east offset to Bradstreet and others No. 1 Richardson, recent north extensioner, had casing set after coring pay from 3,238-43 ft. It is in Section 21, H.&T.C. Survey. In the same pool Iron Mountain Oil Co. started moving its rig to the southeast for its No. 4 Davis, after bringing in No. 3 Davis for an estimated 150 bbl. of oil per hour from the horizon at 3,246-60 ft.

In Jones County's Appling pool the second producer in six attempts was in prospect at the Grisham-Hunter Oil Corp. No. 4 E. D. Appling. The well was reported to have cored 8 ft. of sandy lime showing oil. Spudder is being moved in for completion. The prospective pro-

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ducer is located in the SW cor. Section 32, B.B.B.&C. Survey and between the first dry hole drilled in 1938 and the producer which opened the pool from the 2,632-ft. Swastika sand horizon.

South Jones County's Guitar pool was given its second and deeper producing horizon as T. D. Humphrey No. 2 Guitar, east side of the field, swabbed an estimated 18 bbl. of oil per hour through casing. After plug was drilled from casing set on top of the lower Hope lime drilled from 2,139-52 ft., hole filled with oil and headed 2½ bbl. an hour for several hours. Pay was then treated with 1,000 gal. of acid and testing continues.

In Palo Pinto County J. W. Lane and W. D. Dilbeck have completed their second well in the new pool opened by the operators several weeks ago. The test is the No. 2 Dalton, 1,000 ft. east of the discovery well and it is estimated for 35 bbl. daily from the sand at 1,206-23 ft. Location for a third test in the lease will be staked in the next few days. The area is in Section 1789, T.E.&L. Survey.

WEST TEXAS COMPLETIONS
(24-hour gages)

Crane County

J. J. Dickson No. 2 Ed S. Hughes, 2,395-2,460 ft., 60 bbl. E. E. Fogelson No. 2-C University, 3,425-3,655 ft., 1,214 bbl. Magnolia Petroleum Co. No. 19 Hardwick-University, 3,009-3,142 ft., 151 bbl.

Andrews County

Humble Oil & Refining Co. No. 20 R. M. Means, 4,500-33 ft., 3,124 bbl.

Cochran County

T. G. Shaw No. 1 Carrie S. Dean, 4,903-5,005 ft., 402 bbl.

Gaines County

Humble Oil & Refining Co. No. 1 W. T. Caswell, dry and abandoned at 5,002 ft.

Ector County

Broderick & Calvert No. 18 Foster, 4,080-4,192 ft., 1,108 bbl. Gulf Oil Corp. No. 178 Goldsmith, 4,182-4,245 ft., 44 bbl. Landreth-Tide Water-Phillips No. 8 Holt, 4,132-4,219 ft., 310 bbl. Lee Drilling Co. No. 1 J. L. Johnson, 4,224-4,309 ft., 476 bbl. Phillips-Pure No. 62 C. Cowden, 4,053-4,130 ft., 3,167 bbl. Stanolind Oil & Gas Co. No. 14-A E. F. Cowden, 4,038-4,180 ft., 773 bbl.

Howard County

Sinclair Prairie Oil Co. No. 59 Dodge, 2,530-2,723 ft., 310 bbl.

Pecos County

British American Oil Co. No. 23 Payton, 2,039-85 ft., 214 bbl. Phil Broun No. 21 Tippett, dry and abandoned at 618 ft. Pantex Oil Co. No. 1 State, 1,798-1,825 ft., 310 bbl. Pecos State Oil Co. No. 4 State, 2,050-95 ft., 268 bbl. W. H. Street No. 10 Shearer-Texas, 1,455-85 ft., 876 bbl. Union Oil & Mining Co. No. 2 First National Bank Fort Stockton, 1,763-1,863 ft., 312 bbl.

Schleicher County

Shell Oil Co., Inc., No. 1 Bert Page, abandoned location.

Ward County

Gulf Oil Corp. No. 125 Hutchins, 2,565-2,780 ft., 364 bbl. McQueen & Clevenger No. 2 Sealy, 3,065-68 ft., 406 bbl.

Upton County

Shell Oil Co., Inc., No. 42 Bowen, 2,094-2,120 ft., 226 bbl.

Winkler County

Gulf Oil Corp. No. 111 O'Brien, 2,540-2,770 ft., 236 bbl.

Yoakum County

Humble Oil & Refining Co. No. 4 Abilene State Bank, 4,940-5,100 ft., 880 bbl.

WEST CENTRAL TEXAS COMPLETIONS
(24-hour gages)

Brown County

Lancaster No. 1 McArthur, dry and abandoned at 1,403 ft.

Callahan County

Johnson & Moore No. 1 George, dry and abandoned at 840 ft.

Comanche County

Corvett Oil Co. No. 5 Poteet, 2,790-2,842 ft., 60 bbl.

Eastland County

Choate and others No. 1 Yancey, dry and abandoned at 1,218 ft. V. Gamblin No. 3 Daniels, junked and abandoned at 454 ft.

Jones County

Consolidated Oil Co. No. 3 McCaskey, abandoned location. B. Fields No. 3-B Humphrey, 3,247-55 ft., 1,000 bbl. B. Fields No. 7 Taylor, 3,237-58 ft., 2,440 bbl. Hedrick Oil Co. No. 3 Akard, 2,126-48 ft., 54 bbl. Lewis Production Co. No. 4 Muenzler, 3,231-33 ft., 5,500 bbl.

Palo Pinto County

J. W. Lane No. 1-A Dalton, 1,214-22 ft., 5 bbl.

Shackelford County

A. B. Bissey No. 1 Smalley, dry and abandoned at 810 ft. Crenshaw No. 1 Lynch, dry and abandoned at 310 ft. Everts No. 1 Dawson-Conway, dry and abandoned at 1,803 ft. Holden No. 1 Elliott, dry and abandoned at 1,027 ft. Roeser-Pendleton No. 35-A-85 Cook, 1,335-48 ft., 8½ bbl. Ungren & Frazier No. 3 McCown, 3,141-78 ft., 1,512 bbl.

Taylor County

Knowles No. 2 Bowles, dry and abandoned at 1,973 ft. Tal-Vez Oil Co. No. 1 Galle, 2,339-61 ft., 18,490,000 cu. ft. gas.

PANHANDLE COMPLETIONS
(24-hour gages)

Collingsworth County

Fain Johnson No. 1 Henry Taylor, temporarily abandoned location.

Gray County

Hagy, Harrington & Marsh No. 3 E. Bell, 2,589-2,670

(Continued on Page 88)

Eastern Field Report

By STAFF CORRESPONDENT

Total of 25 Completions; Six Were Producers, 15 Gassers

PITTSBURGH, Pa., June 29.—Completions continued routine in the lower eastern fields during the week. None of the outside deep tests have reached their horizons. A total of 25 operations was reported, of which 4 were dry holes, 15 gas wells, and 6 producers with a daily initial of 51 bbl.

SOUTHEAST OHIO

The best completion was the second test of Ira Hazlett on the Crosby Rogers farm in Newark Township, Licking County, Southeast Ohio. It was bottomed in the Clinton sand at 2,562 ft. and gages 3,650,000 cu. ft.

In Athens County, G. & K. Oil & Gas Co. completed a test on the Samuel G. Ogg farm in the NW¼ Section 30, Rome Township, in the first Cow Run sand at 492 ft. It produced 3 bbl. the first day after shot. In the same quarter section, Ohio Fuel Gas Co. completed a test on the Grant Antle farm in the Maxton sand at 875 ft., gaging 150,000 cu. ft. In the first Cow Run sand at 376 feet, there was a showing of 5 bbl. a day, which was cased off.

In Cuyahoga County, Benedum & Trees completed a test on the Christ Doster, Jr., farm in Section 44, Mayfield Heights village, in the Newburg sand at 2,861 ft., good for 2,000,000 cu. ft. and 10 bbl. In Section 23, same village, their test on the R. L. Williams farm is good for 1,000,000 cu. ft. from 2,817 ft. and 10 bbl. of oil. In Sections 33-34, same village, they completed No. 1 Highland Road Land Co. at 2,855 ft., showing 100,000 cu. ft. along with 8 bbl. They are also drilling on the Ford farm, same village.

In Monroe County, Gold Crown Oil & Gas Co. completed a test on the Leland Platt farm in the NW¼ Section, 18, Washington Township, in the Keener sand at 1,320 ft., producing 2 bbl. the first day without shot.

In Muskingum County, W. L. Swingle and others completed a test on the George W. Bussimer farm in the SE¼ Section 6, Harrison Township, in the Medina sand at 4,110 ft. It will make a 35-bbl. pumper and had a showing of 60,000 ft. of gas in the Clinton sand.

In Washington County, Lon Perdew and others completed No. 4 Lon Perdew, in the NE¼ Section 2, Barlow Township, in a stray sand at 1,237 ft. It had only a small showing and will be abandoned.

In Mahoning County, Tri State Gas Co. has started drilling the Oriskany test on the T. W. Baird farm in the NE¼ of Poland Township about 1½ miles north of the Mahoning River and about 100 ft. from the state line.

SOUTHWEST PENNSYLVANIA

One small producer, one gas well and two dry holes were reported from Southwest Pennsylvania. In Washington County, E. H. and J. B. Tague completed No. 15 Adeline D. McKennan in North Franklin Township, at 1,207 ft., Big Dunkard sand. It will make a ½-bbl. pumper with some gas.

In Hanover Township, Washington County, R. M. Duden and others completed the test on the Roy Scarum farm through the Fifth sand to 2,072 ft. and it was dry.

In Amwell Township, Washington County, Shivers & Co. have reached 2,015 ft. on the Morgan Prigg farm. South Penn Oil Co. is deepening on the J. Q. Zimmerman farm and drilling at 2,645 ft.

In South Franklin Township, Washington County, Harry Williams and others have started drilling No. 3 Jason Buchanan. In Mount Pleasant Township, McGuigan & Co. have reached 775 ft. on the Alvin Stewart farm. In Chartiers Township, Canonsburg Iron & Steel Co. is drilling on the W. G. Ross farm at 1,260 ft. In Morris Township, A. V. Lewis and others are deepening No. 1 Frank McVay at 3,055 ft.

Clarion County

In Clarion Township, Clarion County, Owens Illinois Glass Co. completed No. 3 J. Simpson at 3,345 ft., gaging 26,000 ft.

In Piney Township, Clarion County, T. W. Phillips Gas & Oil Co. drilled on the H. N. Logan farm through the Murraysville sand to 1,293 ft. and it was dry.

In Limestone Township, Squirrel Hill Gas Co. has a rig completed on the N. A. Sloan farm.

Armstrong County

In Cowanshannock Township, Armstrong County, L. F. Watson and others have reached 2,225 ft. on the Jacob Harkleroad farm with 273,000 ft. at 1,660 ft. J. C. Septon and others have started drilling the John Sowers test. Louden Drilling Co. is drilling at 1,950 ft. on the R. H. Goldstrom farm; Ed Young and others at 1,218 ft. on the Wilda McCurdy farm; Peoples Natural Gas Co. drilling by lost tools at 3,460 ft. on the Jacob Wagner farm. Equitable Gas Co. has reached 1,432 ft. on the D. W. Raraigh farm.

In Boggs Township, Armstrong County, Apollo Gas Co. is drilling at 1,470 ft. with a show of gas at 1,465 ft. on the Edgar Karkleroad farm. John Wray has rigged up the Samuel Yockey test. In Manor Township, this operator is drilling at 2,318 ft. in the John Guthrie test. In Wayne Township, Galbraith Drilling Co. is down 1,075 ft. in the James Gallagher test. Apollo Gas Co. is drilling at 665 ft. on the Drohn heirs test. In Plum Creek Township, T. W. Phillips Gas & Oil Co. is drilling at 1,472 ft. on the C. N. Schaeffer test, gaging 170,000 ft. at 1,296 and 1,428 ft.

Indiana County

In Washington Township, Indiana County, Equitable Gas Co. is building rig on the William Parks farm and fishing at 2,791 ft. on the J. J. Potts farm. In Young Township, T. W. Phillips Gas & Oil Co. has reached 2,028 ft. on the B. R. & P. Coal Co. test. In Center Township, this company is drilling at 1,870 ft. on the same tract. In South Mahoning Township it is shut down in the Elmer Steel test. In West Mahoning Township it is drilling at 800 ft. on the Thomas Steffey farm and at 1,665 ft. on the Sarah Lewis farm.

Greene County

In Richhill Township, Greene County, Manufacturers Light & Heat Co. has reached 1,753 ft. in No. 2 Barnett Wiley totaling 120,000 cu. ft.

In Center Township, Equitable Gas Co., deepening No. 2 Mrs. George Phillips, struck a gas pocket in the Injun sand at 2,350-54 ft., which gaged 630,000 cu. ft. but exhausted itself. It is drilling at 2,357 ft.

In Washington Township, P. A. Wilbert and others deepened No. 1 Jacob Johns to 3,245 ft. without striking additional pay and it was plugged back to produce the oil. In Greene Township, Brummage and others have the rig on the H. Durr farm.

In Fayette County, Duquesne Gas Co. is down 650 ft. on the John P. Demaske farm in Nicholson Township. In Menallen Township, Eberly and others are hauling in tools for a test of the Andy Manyak No. 2 lease.

Deep Tests

On Chestnut Ridge, L. J. House Convex Glass Co. shot the test on the Paul Dunham farm in Springhill Township, Fayette County, with 40 quarts at 7,826 ft. There was no gas after shot and it will be plugged.

In Armstrong County, Peoples Natural Gas Co. is drilling at 6,524 ft. on the Lowry Martin farm in Wayne Township or 339 ft. below the base of the Tully lime. Work is slow due to running a pilot hole and cementing the walls.

In Beaver County, Columbian Fuel Co. is down 4,273 ft. on the Abbie Linnenbrink farm in Rochester Township.

WEST VIGINIA

In Hancock County, two small producers were reconditioned and put to repressuring. In Grant district R. J. Braden Co. cleaned out Nos. 1 and 2 on the Bennett Porter farm in the Berea sand and both are good for 5 bbl.

In Clay district, Hancock County, Carl E. Harn drilled on the George Crago heirs through the Injun sand to 510 ft. and it was dry.

Gas Wells

In Braxton County, Pittsburgh & West Virginia Gas Co. completed No. 7680 S. B. Cook in Birch district at 1,703 ft. with 500,000 cu. ft. without shot.

In Calhoun County, Z. N. Connolly completed the test on the Katie Garrison farm in Sherman district at 2,251 ft., gaging 2,300,000 cu. ft. after shot.

In Gilmer County, W. H. Satterfield completed a test on the Rosa Sterns farm in DeKalb district at 1,745 ft., gaging 29,112 cu. ft. before shot at 1,668 ft. Carnegie Natural Gas Co. deepened No. 1541 D. J. Rexroad to 1,988 ft. with 360,000 cu. ft. at 1,980-87 ft.

In Lincoln County A. F. Morris, trustee, deepened No. 2 D. W. Lovejoy in Jefferson district to 3,775 ft. with 225,000 cu. ft. from the shale 24 hours after shot.

In Mingo County, Kermit Gas Co. completed the test on the McCormick and others lease in Kermit district at 3,074 ft., gaging 212,000 cu. ft. 16 hours after shot.

In Roane County, Clifton Oil & Gas Co. completed No. 3 J. L. Looney in Harper district with 134,400 cu. ft. before shot at 2,057-75 ft. Total depth, 2,088 ft.

Oriskany Gas Field

In Poca district, Kanawha County, Spartan Gas Co. completed the test on the Burdette-Haston lease at 4,909 ft. with the Corniferous lime at 4,787-4,893 ft.; Oriskany 4,893 ft., and a final gage of 9,830,000 cu. ft.

In this district, Godfrey L. Cabot, Inc., completed No. 3 D. Holmes Morton in the Big lime at 1,910 ft. with 1,309,000 cu. ft. at 1,823-60 ft. This is the second Big lime well on the lease. Near it on the J. L. McLean farm (Helen M. Hoge) their No. 2 drilled through the bottom of the Big lime at 1,903 ft.

In this district Spartan Gas Co. has made a location on the J. S and E. D. Newhouse farm, elevation 851.4 ft. United Fuel Gas Co. is rigging up the W. J. Glass and C. T. Tolley test; A. A. Beane and others test; and E. U. Dawson test. Mullins Gas Co. is drilling at 2,200 ft., Johnson-Carney test; Meigs Development Co. at 3,535 ft., E. P. Higginbotham test; United Carbon Co. 2,900 ft., D. D. Slater and others test; Brawley-Reid Gas Co. 1,855 ft., A. L. Campbell test; Godfrey L. Cabot, Inc., 1,730 ft., Putnam Co. No. 2; Columbian Carbon Co. 1,505 ft., Celeste Parcell test, and 160 ft. on the A. H. Campbell test.

In Elk district this company is down 1,445 ft. in the Mose Pushkin test and 260 ft. in the Lelia Hanna test; Ten Mile Gas Co. is starting No. 21 Margaret Y. Dickinson. In Union district Ajax Gas Co. is down 3,149 ft. on the Perry Marks test; Buy B. Ray, 790 ft. on the Chloe F. Given test; and Cameron Producing Co. has a rig on the J. W. Casdorph farm.

Outside Deep Tests

In Grant district, Pleasants County, Columbian Carbon Co. is drilling at 5,295 ft. on the Ervin and Hammatt farms or 66 ft. in the Oriskany sand, with no showing of oil or gas.

In Jackson County, Joe Rubin and others have reached 2,450 ft. on the E. W. Brown farm in Ravens-

(Continued on Page 98)

Kansas Developments

By DAL DALRYMPLE

New Pools and Extensions; Hittle Has Another Gusher

An important prospect in western Kansas is Natural Gas Co. of Dallas and Iron Drilling Co. No. 1 Prospishel, NE NE SE Section 20-17-15w, 12 miles north of Hoisington in western Barton County. Topeka lime was topped at 3,018 ft., Kansas City lime at 3,326 ft.; conglomerate at 3,542 ft. and Arbuckle dolomite at 3,548 ft. A core taken at 3,350-57 ft. showed 4 ft. of saturation.

Fourteen miles southeast of Lyons, C. C. Nelson and Nelson Drilling Co. have a hole full of oil in No. 1 Hodge, NW NW NE Section 25-20-6w, at a total depth of 3,323 ft., Mississippi chat.

The Silica pool in Rice and Barton counties was extended ¾ mile to the northeast by Central Petroleum Co. and Duwe & Farris No. 1 Dippell, C N line NE SE Section 27-19-10w, which swabbed 142 bbl. of oil naturally in 4 hours from Arbuckle dolomite at 3,292-3,313 ft.

The Pawnee Rock pool in Pawnee County was given a ½-mile extension by Simpson Oil Co. and Texon Oil Co. No. 1 Nelson, NE NE SE Section 14-20-16w. The well is credited with a production of 354 bbl. in 24 hours from Arbuckle dolomite at 3,777-3,806 ft.

The Burrton field, which lies in Reno and Harvey counties, was extended on the Harvey County side by Aylward Production Co. No. 1 Wiley, C S½ NE Section 18-23-3w, which made 671 bbl. per day at a total depth of 3,371 ft., in chat.

Four miles north of Chase in Rice County, Finston & Co. and Harry Gore No. 1 Hathaway, opened a pool late in the week in C N line NW SW Section 27-19-10w. The hole filled 2,500 ft. with oil and made two flows over the derrick top. Pay is at 3,038-43 ft. in Kansas City-Lansing lime. Wildcat failures were reported in Rooks, Cowley, Sumner and Shawnee counties. Hittle pool in Cowley came through with two big wells, one of which was rated at 10,000 bbl. a day.

Wildcat Results

Web-Son Oil & Refining Co. No. 1 Bair, SE NE NW Section 34-10-19w, Rooks County wildcat, had Simpson sand at 3,667 ft., Arbuckle lime at 3,693 ft., but was dry and abandoned at 3,707 ft. when the hole filled with water after plug was drilled.

Cities Service Oil Co. No. 1 Pope, SE NE SW Section 21-31-3, Cowley County wildcat, topped Mississippi lime at 3,112 ft., Arbuckle lime at 3,458 ft., and was dry and abandoned when water was encountered at total depth of 3,469 ft.

Trigg Drilling Co. and others No. 1 Teichmann, NW NE SE Section 35-21-12w, wildcat in Stafford County, found pay in the Lansing lime at 3,356-72 ft. and was bottomed at 3,658 ft. The well flowed 293 bbl. of oil and no water in 8 hours and made a potential of 881 bbl.

Burke-Greis Oil Co. No. 1 Seyfert, SE SE SE Section 18-34-2, Sumner County wildcat, topped Mississippi lime at 3,561 ft., Simpson at 3,860 ft., Arbuckle at 3,938 ft. and was dry and abandoned at a total depth of 3,960 ft.

W. M. McKnab No. 1 Fritz, SW SE NW Section 4-12-14, Shawnee County wildcat, was abandoned at a total depth of 2,720 ft. when the hole filled with water. Wilcox sand was found at 2,632 ft. and the Arbuckle lime at 2,689 ft. with no oil shows in either zone.

Wildcat first reports in Kansas included the following: J. R. Lowell and others No. 1 Olsen, NE NE SE Section 13-35-7, Cowley County, a location.

Skelly Oil Co. No. 1 Miller, CSL N½ NE Section 31-27-10w, Kingman County, cellar and pits.

C. L. Sheedy No. 1 Gilroy, C E½ NE NW Section 13-25-12, Greenwood County, rigging up.

I. W. Murfin No. 1 Zajic, C S½ SW NE Section 31-16-10w, Ellsworth County, moving in material.

C. H. Weaver No. 1 James, NE NW SW Section 25-19-10w, Rice County, building rig.

Central Petroleum Co. No. 1 Crisman, SW NW NE Section 20-14-14w, Russell County, location.

Shell Oil Co., Inc., No. 1 Berrick, NW NW SE Section 13-15-13w, moving in material.

Estimated Daily Production

Estimated daily production for Kansas for the week ending June 24, and for the preceding week, was as follows:

	Barrels	
	June 24	June 17
Oxford City	950	1,050
Burrton	10,100	10,225
Ritz-Canton	5,650	5,675
Graber	2,725	2,950
Hollow-Nikkel	2,675	2,725
Lerado	875	650
Voshell	1,625	1,675
Wellington	2,075	2,100
Ellsworth County:		
Lorraine	1,625	1,750
Other pools	1,860	1,855
Rice-Barton counties:		
Bloomer	2,225	2,300
Chase	4,375	5,050
Geneseo	2,850	3,150
Raymond	625	700
Silica	11,950	11,700
South Silica	2,150	1,975
Keesling	1,150	725
Wherry	4,025	4,200
Miscellaneous Rice	7,330	7,195
Miscellaneous Barton	10,455	8,425
Russell County	22,525	23,050
Sedgwick County	3,900	4,075
Ellis:		
Bemis	7,000	6,025
Miscellaneous	3,015	3,960
Kingman County	605	580
Stafford County	5,125	5,265
Greenwood County	8,750	8,800
Butler County	17,650	17,775
Other fields	22,160	22,945
Total Kansas	168,025	168,550

Ellis County

In the Bemis pool, Ellis County, Cities Service Oil Co. No. 5-A Hall, NE SE SW Section 14-11-17w, found Arbuckle lime at 3,365-67 ft., total depth, and filled 2,500 ft. with oil in 6 hours. After acidizing with 2,000 gal. it was completed for 3,500 bbl. depthograph potential.

Cities Service Oil Co. No. 9 Rumsey, NW NW SE Section 23-11-17w, topped Arbuckle lime at 3,386 ft., had total depth at 3,391 ft. and after acidizing was completed for 3,500 bbl., depthograph potential.

Shell Oil Co., Inc., No. 17 Rumsey, NW NW NE Section 23-11-17w, received Arbuckle at 3,377-87 ft., total depth, and swabbed 282 bbl. of oil in 4¼ hours. Twenty-four-hour depthograph potential was 3,500 bbl.

Deep Rock Oil Co. No. 29 Baumer, SE NE SE Section 27-11-17w, had only a fair showing of oil in the Arbuckle lime at 3,459-63 ft., total depth, but after acidizing pumped 10 bbl. of oil per hour.

Darby Petroleum Co. No. 1-B Peavey, NE NE NW Section 24-11-18w, in the Peavey pool, pumped 422 bbl. of oil in 8 hours and made potential of 1,266 bbl. Top of Arbuckle pay was 3,439 ft., total depth was 3,448 ft.

Russell County

Three completions in the Trapp pool, Russell County, were W. I. Southern No. 14 Sellens, NE NE SW Section 29-15-13w, which found the Arbuckle lime at 3,280-82½ ft., total depth, and filled 1,200 ft. with oil in 5 hours. The well was treated and pumped 450 bbl. of oil in 8 hours and made 24-hour potential of 1,351 bbl.

J. J. Hall No. 3 Landon, SW SE SE Section 11-15-14w, found pay in Lansing lime at 3,098-3,103 ft. Water was encountered at total depth of 3,164 ft. and the hole plugged back to 3,138 ft. and pumped 583 bbl. of oil in 8 hours. Initial potential was 1,750 bbl.

Darby Petroleum Co. No. 13 Michaelis, NE NW SE Section 36-15-14w, pumped 540 bbl. of 39-gravity oil in 8 hours and was completed for potential of 1,621 bbl. Pay in the Arbuckle was topped at 3,307 ft., total depth was 3,319 ft.

In the Greenvale pool, Central Petroleum Co. No. 2 Kuhnle, SE NE SW Section 4-15-12w, had Lansing at 3,068-74 ft., total depth, and pumped 353 bbl. of oil in 8 hours. Twenty-four-hour potential was 1,061 bbl.

Two failures in the Gorham pool of Russell County were Bridgeport Machine Co. No. 5-B Mills, SE SE SE Section 33-13-15w, Lansing lime at 3,045 ft., total depth in granite at 3,350 ft., dry and abandoned.

A. H. Witt No. 1 Furthmeyer, SE NE SE Section 9-14-15w, had a slight showing of oil at 3,050 ft., was bottomed at 3,267 ft., plugged back to 3,050 ft. and treated with no increase, and was abandoned.

Big Wells in Cowley

A. D. Barnette and others No. 3 Waite, NE SW SW Section 31-31-4, Hittle pool of Cowley County, flowed 216 bbl. of oil per hour and made a bomb potential of 4,770 bbl. per day. Arbuckle pay was found from 3,322-31 ft., total depth.

Hartman & Blair No. 7 Waite, SW SE NW Section 21-31-4, Hittle pool, Cowley County, topped Arbuckle at 3,341 ft., total depth 3,351 ft., and flowed 716 bbl. of oil in a 1-hour test. Initial potential was rated at 10,000 bbl.

Rice County

In the Campbell pool of Rice County the following completions were reported: Barnsdall Oil Co. No. 1 Murphy, SE SW SW Section 22-19s-9w, found Hunton pay in two zones, 3,260-70 ft. and 3,258-3,304 ft. and pumped 244 bbl. of oil in an 8-hour test. Initial potential was 733 bbl. daily. Total depth was 3,406 ft.

Cities Service Oil Co. No. 1-C Purcell, SE SE SE Section 28-19-9w, pumped 403 bbl. of oil in 8 hours from Arbuckle lime at 3,181-3,214 ft., total depth. Twenty-four-hour potential was 1,211 bbl.

Skelly Oil Co No. 1 Purcell, NE SE NE Section 33-19-9w, topped Arbuckle lime at 3,190 ft. and was bottomed at 3,215 ft. It pumped 349 bbl. of oil in 8 hours and the well was completed for potential of 1,047 bbl.

Johnson County

O. B. Cowan and others No. 1 Johnson, NW NE NW Section 3-14-22, was completed as a gas well after gaging 214,000 cu. ft. of gas from the Burgess sand at 950-1,020 ft., total depth.

O. K. Supply Co. and others No. 2 Kamabe, NW NE NE Section 15-14-22, found pay sand at 707-23 ft., Bartlesville sand from 830-54 ft. and pumped 10 bbl. of oil daily. Total depth was 997 ft.

Spearman & Trammel No. 1 Bigelow, NE NE SW Section 15-14-22, pumped 10 bbl. of oil per day from sand found at 820-75 ft. Total depth was 842 ft.

In Other Counties

Stanolind Oil & Gas Co. No. 4-A Morrison, C E½ E¼ SW Section 27-16-13w, Ainsworth pool of Barton County, found pay in the Arbuckle lime at 3,390-92 ft., total depth, and pumped 335 bbl. of oil in 8 hours. The well made potential of 1,006 bbl.

Power Oil Co. No. 1 Schlegel, SW SW SW Section 26-17-16w, Otis pool of Rush County, had Lansing lime at 3,340 ft., Arbuckle at 3,634 ft. Core samples from 3,637-47 ft. showed some oil but the well was dry and abandoned at 3,734 ft.

In the Whelan pool, Barber County, Lario Oil & Gas Co. No. 1 Nuckolls, NW NW SE Section 30-31-11w, found pay in the Mississippi lime at 4,280-4,300 ft.,

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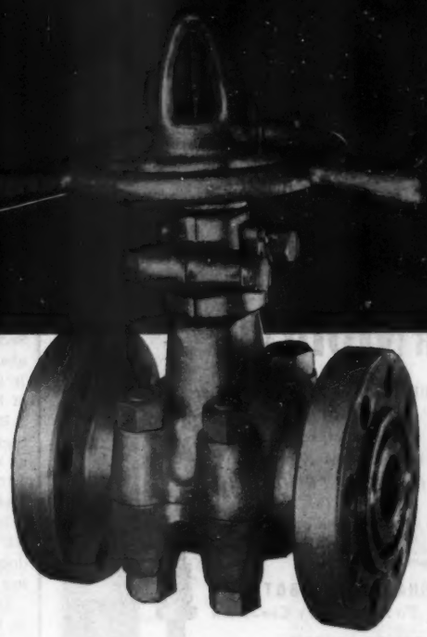

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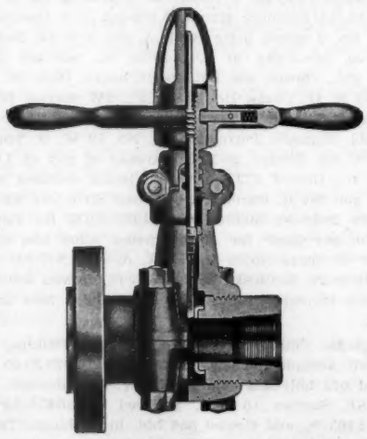

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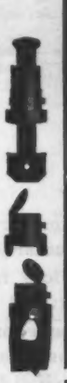

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total depth, and pumped 235 bbl. of oil in 8 hours. Initial potential for 24 hours was 707 bbl.

E. B. Shawyer No. 16 Stone, SW SE NW Section 2-25-5, Butler County, pumped 25 bbl. of oil in 24 hours from Peru sand at 2,182-2,225 ft., total depth.

Stanolind Oil & Gas Co. No. 2 Fischer, SE SW SW Section 31-21-12w, Stafford County, penetrated Arbuckle lime at 3,624-32 ft., total depth, and pumped 214 bbl. of oil in 8 hours. Potential was 643 bbl.

Shaffer & Howell No. 24 Imthurn, C E½ SE Section 4-23-13, Greenwood County, Virgil pool, pumped 15 bbl. of oil and 10 bbl. of water daily from Bartlesville sand at 1,596-1,623 ft., total depth.

Missouri Operations

ST. JOSEPH, Mo., June 26.—E. F. Slater and others No. 1 Sayer, NE NW SE Section 14-65n-18w, Putnam County, about 10 miles south of the Nebraska line, was a fresh-water hole in St. Peter sand at 1,375-1,525 ft. but drilling was continued with the Arbuckle lime as the objective.

Frank Hopper and others No. 1 Black, NW NW NW Section 36-52n-32w, in Clay County, was definitely abandoned as a failure at a total depth of 1,680 ft. It had Arbuckle lime top at 1,657 ft., and a hole full of black sulfur water at 1,670-80 ft.

Berry Brothers and others No. 1 Rule, C SW SW Section 20-53n-33w, Platt County, had Mississippi lime at 980 ft.; set 8-in. casing at 1,103 ft.; found water at 1,155-60 ft. and was drilling at a reported depth of 1,345 ft.

In Jackson County Joe G. Kelly No. 1 fee, NE SW NE Section 26-51n-34w, was a failure and was abandoned at a total depth of 730 ft. It had a small showing of oil in a coarse sand at 610-15 ft.

Details of other Missouri drilling wells will be found in the wildcat reports elsewhere in this edition.

Illinois Fields

(Continued from Page 60)

treatments of 1,000 gal. and 4,000 gal. Benoist was topped at 1,732 ft., Aux Vases at 1,796 ft., and Fredonia at 1,913 ft. Shell No. 2 Young Heirs A, NW NE SE Section 20-2n-2e, McClosky at 1,918-2,062 ft., flowed 504 bbl. in 24 hours after a 5,000-gal. acid treatment. Shell No. 3 Salem State Bank A, NE NW SE Section 20-2n-2e, McClosky at 1,914-2,060 ft., acidized with 5,000 gal., flowed 456 bbl. in 21 hours. Ohio Oil Co. No. 13 M. G. Young Heirs, SW NE SW Section 20-2n-2e, pay streaks at 1,959-2,009 ft.; McClosky lime flowed 477 bbl. Magnolia Petroleum Co. No. 19 W. B. Young, SE SW NE Section 20-2n-2e, streaks of pay at 1,919-2,030 ft., flowed 172 bbl. after being acidized with 2,000 gal. W. R. Curry No. 4 Young Strip, NE SE SE Section 20-2n-2e, McClosky at 1,934-2,032 ft., flowed 75 bbl. per hour for an estimated 1,800 bbl. daily Potter Brothers No. 8 M.&I.R.R. A, NW NE SE Section 16-2n-2e, McClosky at 2,065-95 ft., flowed 900 bbl. per day through tubing after a 3,000-gal. acid treatment.

Magnolia Petroleum Co. No. 5 C. D. Phillips, SE SW NE Section 16-2n-2e, McClosky at 2,070-2,100 ft., flowed 672 bbl. Magnolia No. 30 W. O. Chitwood, NE NW SE Section 16-2n-2e, acidized in McClosky at 2,071-2,105 ft. and flowed 354 bbl. in 24 hours. Texas Co. No. 3 G. Leibee, SW SE NW Section 9-1n-2e, pumped 40 bbl. in 3 hours from Benoist at 1,868-89 ft. for an estimated initial production of 280 bbl. Texas No. 2 G. Leibee, SW SE NW Section 9-1n-2e, Benoist at 1,865-90 ft., pumped 30 bbl. in 3 hours for an estimated 210 bbl. daily. Texas No. 3 R. Landford, NW NW NW Section 9-1n-2e, pumped 22 bbl. in 3 hours from the Benoist at 1,819-45 ft. for an estimated 154 bbl. daily. Texas No. 5 C. R. Richardson B, SE SE SE Section 5-1n-2e, flowed 70 bbl. in 3 hours from Benoist at 1,804-40 ft., and rated at 490 bbl. daily. Texas No. 16 B. Hawkins, NW NE SW Section 5-1n-2e, flowed 74 bbl. in 3 hours from McClosky at 1,934-49 ft., acidized with 3,000 gal. and flowed 98 bbl. in 3 hours, rated at 686 bbl. daily.

In the Dix pool, in Jefferson County, Carter Oil Co. completed No. 2 Lester Breeze, SW NE NE Section 16-1s-2e, in Benoist at 1,921-29 ft. for 168 bbl. of oil and 2 bbl. of water on the pump, after a 10-qt. shot.

Ed Robinson and others abandoned No. 1 Brinkman, NW NW SE Section 12-2s-4w, Washington County, at 1,490 ft., St. Louis lime. Also in Washington County, Zephyr Drilling Co. No. 1 Dr. Long, NW SE SW Section 26-2s-1w, was abandoned at 1,885 ft., in St. Louis lime. The test had several shows from 1,593 to 1,625 ft. P. Cochran and Murray No. 1 Gebhart roadway, NE NE NW Section 15-3s-3w, was abandoned at 1,305 ft. after water was found in the Benoist topped at 1,285 ft. Magnolia Petroleum Co. No. 3 S. Kurrwicke, NW NE NE Section 22-3s-3w, was a 48-bbl. pumper from Benoist at 1,255-91 ft., shot with 15 qt.

Gallatin County

J. Zeffa abandoned No. 1 Turner, SE NW NW Section 27-9s-9e, Gallatin County, at 2,717 ft.; Roseclair lime. The test had only a slight show at 1,880 ft.

William Frank No. 1 George Kause, SE NE SW Section 22-5n-3w, McDonough County, was abandoned at total depth of 677 ft. after obtaining no show in the Niagaran at 585-625 ft.

Eason Oil Co. No. 1 Bank A, NE NE NW Section 24-4n-3w, Bond County, was abandoned at 1,155 ft.

Wayne County

Puckett No. 1 Oakley, NE NW NE Section 34-2s-8e, Wayne County, had McClosky pay at 3,370-79 ft. and 2,500 ft. of oil in the hole when acidized with 5,000 gal. It flowed 60 bbl. of oil per hour and was estimated good for over 1,000 bbl. daily. Illinois Mid-Continent Oil Co. No. 1 Emma Wilson, SW NW NW Section 35-2s-8e, had McClosky at 3,396-3,415 ft. and flowed 115 bbl. of oil in the first hour, and 1,000 bbl. in 7½ hours. Pure Oil Co. No. 2 Leota McCracken, C W½ NW SW Section 3-1n-8e, was acidized with 2,000 gal. and reacidized with 5,000 gal. in McClosky pay streaks at 3,083-3,130 ft., and pumped 60 bbl. of oil and 12 bbl. of water in 24 hours.

Strickler No. 2 Philip Frye, C W½ NE NE Section 33-1n-10w, St. Clair County, had Trenton lime at 648-700 ft., was acidized with 1,000 gal., and pumped 20 bbl. of oil and 400 bbl. of water in 24 hours.

Wildcat First Reports

George Anderson No. 1 Ulrich, C W½ NW NW Section 29-15n-5e, Moultrie County, rigging up rotary tools.

Marvin and others No. 1 J. H. Bell, SW SE SE Section 28-12n-7e, Coles County, set 183 ft. of 10-in. surface pipe and was shut down at 491 ft.

Max Conrey No. 1 William Nagel, SW SW NW Section 7-2s-4w, Washington County, rigging up rotary.

Illinois Mid-Continent Oil Co. No. 1 Sarah Harris, NW SE NE Section 3-3s-8e, Wayne County, rigging up rotary.

Kenyon Oil Co. No. 1 G. T. Vaughan, SW NE NW Section 1-3s-8e, Wayne County, rigging up to drill.

Illinois Mid-Continent Oil Co. No. 1 Vaughan Heirs, C N½ NE SW Section 2-3s-8e, Wayne County, spudding in for a rotary test.

W. R. Curry No. 1 P. and W. Krughoff, SE NW NW Section 10-3s-3w, Washington County, rigging up rotary.

Among the Outposts

Morton Oil Co. No. 1 Strunk, NW NE SE Section 18-25n-3w, Tazewell County, drilling at 1,050 ft.

Nelson, Brown and others No. 1 Edward Stroh, NE SE NW Section 19-24n-7e, Ford County, drilling at 300 ft.

Seaboard Oil Co. No. 1 Purvis, NE SW SE Section 9-13n-6e, Moultrie County, set 10¾-in. casing at 1,112 ft. and drilling ahead at 1,395 ft.

Meyer A. Marks No. 1 Ed Buhs, SE SW NW Section 13-11n-1w, Christian County, drilling at 1,400 ft.

Kingwood Oil Co. No. 1 Howe, SE SE SE Section 7-10n-4e, Shelby County, shut down for orders at 2,454 ft.

Jack S. Brown and others No. G. W. Hefly, SW SE SE Section 4-9n-3w, Montgomery County, was rigging up machine.

Anderson No. 1 Hostettler, SW NW SW Section 31-8n-11w, Jersey County, 1,400 ft., flowed salt water and was shut down.

W. N. Lee and others No. 1 Thomas Sharf, NE SW SE Section 27-7n-4w, Bond County, was rigging up machine. P. L. Anderson No. 1 John Morris, NW NW NW Section 16-6n-3w, skidded rig and spudded to 50 ft. Jenkins and others No. 1 White, SW SE NW Section 17-5n-4w, was rigging up machine.

Downey and others No. 1 Cochran, SE SE SW Section 12-5n-12w, Crawford County, was drilling at 330 ft.

Pure Oil Co. No. 1 Sayre Consolidated, SW SW SW Section 13-4n-9e, Richland County, 3,029 ft. total depth, acidized with 6,000 gal. tested salt water, plugged back to 2,670 ft. Kitchen & Wilson No. 1 R. E. Wilson, SE SE SE Section 13-3n-9e, set 90 ft. of 10-in. casing, and drilling at 1,975 ft.

Ohio Oil Co. No. 1 Chapman, north extension of Noble-Denver pool, SW SW NW Section 13-4n-9e, Richland County, 3,021 ft., 7-in. casing at 2,920 ft., removable pipe at 2,616-36 ft. Plugged back to 2,685 ft., casing removed, salt water and 200,000 cu. ft. of gas; shut down for orders; Weiler sand at 2,616-36 and 2,663-78 ft.

Giffert Drilling Co. No. 1 Garner, SE NW NE Section 25-6n-2e, Fayette County, shut down for orders after coring from 1,590 to 1,605 ft. and recovering saturated streaks of sand.

Kingwood Oil Co. No. 1 McWhorter, C E½ SE NW Section 15-6n-6e, Effingham County, plugged back from 6,543 ft. to 2,985 ft. and produced 15 bbl. of oil and 48 bbl. salt water per day.

In White County Sun Oil Co. No. 1 Ford, NW NE NE Section 18-5s-14w, plugged back to 3,003 ft. from 3,017 ft. and pumped 58 bbl. of oil and 70 bbl. of water in 2 hours and was continuing to test. Mazda Oil Co. No. 1 Carmi Orphanage, SE NE SE Section 22-5s-9e. plugged back to 3,008 ft. from total depth of 3,228 ft. and shut down for orders. Palmer Corp. No. 1 Carmi Orphanage, NE SE SE Section 22-5s-9e, set 7-in. casing at 2,855 ft., total depth 2,882 ft., shot with 10 qt. and cleaning out. Chisom No. 1 Boultinghouse, C W½ SW SW Section 10-4s-14w, Vienna at 2,210 ft., drilling at 2,273 ft. Anding & Nation No. 1 Belva McClutosk, C SE SW Section 31-3s-8e, McClosky at 3,363 ft. On a drill-stem test 2½ bbl. of oil was recovered in 38 minutes. St. Louis at 3,395 ft., total depth 3,405 ft. Ran 3,340 ft. of 5½-in. casing. J. Ligget No. 1 M. How, NE NW SE Section 32-3s-14w, pumping 200 bbl. of fluid, 75 per cent water, from 2,988 ft.; testing.

In Franklin County M. & G. Drilling Co. No. 1 Franklin Realty Co., NE NE SE Section 21-6s-3e, had Glen Dean at 2,343 ft. and drilling at 2,618 ft.

In Hamilton County Kingwood Oil Co. made location for No. 1 Griswold, SE SE NE Section 29-6s-6e. Palacine and others No. 1 Old Ben Coal, NW NE NE Section 4-5s-2e, set 10-in. casing at 114 ft. and drilling at 710 ft.

In Williamson County Shipman and others No. 1 Chauness, NW SW SW Section 21-9s-9e, shut down at 1,363 ft.

In Edwards County Longora and others No. 1 Severns, SW NW NW Section 18-1s-10e, was spudding.

In Washington County Hardman No. 1 Bozanski, SW NW SW Section 19-3s-1w, rigging up standard tools. Blankenship No. 1 McConnel, SW SW NE Section 15-3s-3w, drilling at 1,286 ft.

In Monroe County J. E. Cummings No. 1 G. H. Burger, SE SW SE Section 19-1s-10w, will acidized at 880 ft. Crittendon & Nollkemper No. 1 Schroeder, C S½ SE NE Section 14-2s-10w, set casing on top of Trenton at 469 ft., total depth 470 ft.

In Wabash County Knight No. 1 Huffman, SW NW NE Section 29-2s-13w, location. Bartlett No. 1 Winifred Gray, NW NW SE Section 30-2s-13w, Glen Dean 2,236 ft., Golconda 2,338 ft., cored from 2,451-67 ft. and reaming down to core again. Harrel and others No. 1 B. and A. Schultz, NW SW SE Section 30-2s-13w, Palestine at 1,804 ft., drilling at 1,960 ft. Magnolia Petroleum Co. No. 1 Meredith, SW SW NE Section 30-2s-13w, set 10-in. casing at 287 ft. and drilling at 1,520 ft. Eason Oil Co. No. 1 Schanf, NW SE SE Section 31-2s-13w, Menard 1,955 ft., Waltersburn 2,029 ft., Tar Springs 2,125 ft., Cypress 2,470 ft., Weiler 2,473 ft., total depth 2,486 ft., and will run casing. Clyde Washburn No. 1 Pfeifer, SW SW SW Section 13-1s-13w, plugged back to 1,955 ft. in the Tar Springs, shot with 10 qt., 250 ft. of oil in hole; shot with 20 qt., fluid raised to 550 ft.; will be put on pump. Hughes No. 1 Tanguary Brothers, SW SW NE Section 30-1s-13w, was drilling at 1,220 ft. Continental Oil Co. No. 1 A. E. Schultz, NE SE SE Section 25-2s-14w, Waltersburg 2,033 ft., Cypress 2,466 ft., a show of oil at 2,514 ft. and drilling at 2,682 ft.

In Wayne County Robinson No. 1 Leach, NW SW NW Section 14-2s-8e, Fredonia 3,358 ft., casing 3,304 ft., total depth; shut down for orders. Robinson No. 1 Carter, SE NE NW Section 15-2s-8e, McClosky 3,293 ft., casing to 3,360 ft., total depth. Perforated at 3,262 ft. and got a hole full of water; ran squeeze job, and ready to drill plug and test McClosky. Porter No. 1 Klemrike, NE SE NW Section 15-2s-9e, shut down at 2,390 for repairs. Bruner No. 1 Bothwell, SE NE SE Section 24-2n-7e, Cypress at 2,645 ft., show of oil at 2,648 to 2,700 ft., and was drilling at 2,937 ft. Iroquois Oil & Gas Co. No. 1 Phillip Walker, SW SW SW Section 9-3s-9e, pay at 3,427 ft., total depth 3,455 ft., running casing. Clark Brothers No. 1 Eureka School, SW SE SW Section 22-1s-7e, drilling at 2,630 ft.

In Edwards County McFadden No. 1 Bump, C SE SW Section 34-2s-14w, had rig up. Massad and others No. 1 Amy Foop, SE NW SE Section 13-3s-10e, moving in rotary tools.

In Jefferson County Magnolia Petroleum Co. No. 1 E. L. Severs, SW SE NW Section 22-2s-1e, St. Genevieve 2,190 ft., set 7-in. casing at 2,190 ft. to test show of oil at 2,020 ft; drilling plug. Shendal and others No. 1 Sorenson, NE NE NW Section 5-2s-2e, set 5½-in. casing at 2,040 ft., drilling at 2,068 ft. Shell Oil Co. No. 1 Jefferson Oil & Gas Co., NE NE SW Section 32-3s-2e, set 111 ft. of 10-in. casing. Kingwood Oil Co. No. 1 C. E. Cook, C W½ SE SW Section 18-3s-4e, drilling at 1,060 ft.

In Saline County Kingwood Oil Co. No. 1 Allyn, SW SW NE Section 11-9s-7e, 3,045 ft. and running Schlumberger. Kingwood Oil Co. No. 1 Oliver, SE NW NW Section 11-10s-6e, rig up.

In Johnson County Tunnel Hill Oil Co. No. 1 J. Boner, C W½ SW NE Section 30-11s-3e, ran 1,195 ft. of 10-in. casing and was drilling ahead.

In Adams County L. C. Robinson No. 1 A. C. Fowler, NE SE SE Section 12-2n-5w, of the fourth principal meridian, drilling at 865 ft.

In Brown County, E. E. Goode and others No. 1 Hopke, NE NW NW Section 9-1n-4w, of the fourth principal meridian, drilling at 90 ft.

In Hamilton County Helmerich & Payne No. 1 Hamilton County Land Bank, SE SE SE Section 6-4s-7e, was drilling by a fish, total depth 3,312 ft.

In Gallatin County J. Garfield Buell No. 1 Egyptian Fuel & Lumber Co., C N½ NW SE Section 16-8s-10e, Cypress at 2,416 ft. Bailing, with a showing of gas.

In Perry County Stevens & Ward No. 1 Albers, SE SE SE Section 32-4s-2w, shut down at 805 ft. Blankenship No. 1 Rittsowski, SE SE NE Section 13-4s-2w, drilling at 150 ft. Blankenship No. 1 B. Rheineicker, NW NW NE Section 3-6s-4w, ready to run 5-in. casing at 1,322 ft. E. J. Shaefer No. 1 F. Sprague, SW NE NW Section 33-5s-14w, shut down at 1,215 ft.

EASTERN KENTUCKY

ASHLAND, Ky., June 26.—Only one completion is included in the report of eastern Kentucky operations this week. The Inland Gas Corp. completed a 250,000-cu. ft. gas well on Lindsey Amburgy land on Carr's Fork in Knott County, total depth 3,582 ft., in white shale.

In Knott County, Inland Gas Corp. is down 1,482 ft., in Salt sand, in No. 210, E. H. Pigman land, on Right Fork of Troublesome Creek. Kentucky West Virginia Gas Co. was drilling at 550 ft., in slate, in No. 580, H. H. Smith land, on Caney Creek.

In Floyd County, Kentucky West Virginia Gas Co. is rigging up No. 5253 George McKinney, on Deadening Fork of Toler Creek, and has reached 738 ft., in sand, in No. 5254 Willard Hamilton, on Branham Creek of Mud Creek. The same company is down 1,466 ft. in No. 542 Jacob Damron, on Ivy Creek, with deepening continuing in Big lime.

In Martin County, the Kentucky West Virginia Gas Co. was drilling below 320 ft., in slate and shells, in No. 5256, L. T. Mills land, on Ramey Branch of Rockhouse Fork.

In Magoffin County, Rough River Corp. is down 650 ft. in No. 4 H. B. Adams, Sr., on Rock Lick, in the Burning Fork district.

In Powell County, Joe T. Brown was drilling below 700 ft. in No. 6 Lowery Heirs, at Mountain Springs, in South Fork district. Melvin Townsend is down 500 ft. in No. 2 Evans Oil-Gas Co., on South Fork. Same operator has reached 100 ft. in No. 2 J. P. Perry, on South Fork. Less Jones is drilling at 300 ft. in No. 1 L. S. Townsend, on South Fork. Hooks Brothers are down 350 ft. in No. 1 James Bellomy, on South Fork. Boyd, Knott, and Brown were drilling at 100 ft. in No. 4 L. T. Rogers, on South Fork. Lisle & Kinser Brothers were below 100 ft. in No. 1 Kinser Heirs, on South Fork.

Southwest Texas Fields

(Continued from Page 75)

Zapata County

Comitas field: Nordan & Morris No. 16-C Haynes sand, 1,221-26 ft., 49 bbl., pumping. Mirando Valley field: Carter & Rubsamen No. 2 Lopez, perforated casing 1,825½-28½ ft., 50 bbl., pumping. Carter & Rubsamen No. 3 Lopez, 46 bbl., ⅝-in. choke.

Unexcelled

PERFORMANCE

HERE is an instance where the B-M-W TOWER TYPE Ball and Seat, with its 2-WAY NON-MAGNETIC CROWN, lasted more than EIGHT TIMES AS LONG as the standard type.

Above we show the new B-M-W Tower Type Ball and Seat. Note its elongated and grooved seat. Cannot be distorted when assembling in the complete valve. An ideal leakless fit is the assured result.

When using the B-M-W 2-WAY Non-Magnetic Crown (shown at the right) in wells affected by lodestone, it is not necessary to use bronze balls. The steel ball will not stick in this crown.

In a well at Thrift, Texas, a 1¼" B-M-W TOWER TYPE Ball and Seat with 2-WAY Crown was installed on July 10, 1937. Eight months later it was still running. The average life of a standard Ball and Seat in this well was less than thirty days.

These new B-M-W Products were described in the Dec. 1, 1938, issue of The Oil and Gas Journal, page 114. They are also described in the Composite Catalog. Or, for more complete information, write to us.

SUPPLY STORES SELL THEM

—also other B-M-W PRODUCTS: ● TEX TYPE Plunger Fittings and Valves; ● ADMORE Insert Pump Anchors; ● NEILSON Tools (Safety Sucker Rod Hooks, Tubing Hooks, Rod Elevators, Sucker Rod Sockets, etc.); ● BALLS and SEATS (made for every pumping service); ● ADMORE Liner Barrels; ● COLLINS Belt Clamps; ● FLUID-LIFTER Pumps; and ● NU-TEX Pumps.

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Rocky Mountain Area

New Test in Northern Utah; Continental's Deep Wildcat

By
T. R. INGRAM

DENVER, Colo., June 26. — The northern Rocky Mountain area had an eventful week, although completions ran about normal. The second drilling well to reach a depth of 10,000 ft. in this area obtained that distinction in the Continental Oil Co. and others wildcat on Divide Creek in western Colorado. Colorado had no completions or new operations.

In Wyoming, the Continental Oil Co. has contracted 1,250 bbl. of Big Muddy crude daily to the Socony-Vacuum Oil Co. for its Casper refinery and will replace this quantity with Leo sand crude from Lance Creek. One completion was reported in Lance Creek in the Continental No. 9 Otto Rohlff, a Sundance sand well which started off at 30 bbl. an hour. The Resolute Oil Co. No. 2 State, on Badger basin, was completed for 250 bbl. New operations include one for the Sinclair-Wyoming Oil Co. in Big Sandy draw, one for the J. C. Anderson Drilling Co. in Sublette County, and two in the Osage field.

In Montana, the Cut Bank area had three completions, of which one was a dry hole, five new locations, and prospects for another Sunburst sand well in the Glacier Production Co. No. 1 Larson, which swabbed 150 bbl. in 12 hours. The Huber-Montana Co., a subsidiary of the J. M. Huber Corp., has acquired a 7,000-acre block in North Cut Bank and made a location for its first well. Kevin-Sunburst had one new operation, but no completions.

Utah is to have an important test on the White Valley structure in Box Elder County, where the Northern Oil Co. has made a location.

NEW MEXICO

The week's crop of completions in the Lea and Eddy County fields were of the recent average kind, with the exception of one drilled by Anderson & Prichard, which looked good for 1,600 bbl. a day.

Drilling & Exploration Co. No. 1-C State, C W½ SE SE Section 24-17s-34e, Vacuum area of Lea County, was completed for 160 bbl. of oil in 24 hours. Top of pay was found at 4,525 ft. and the well was bottomed at 4,665 ft.

Ohio Oil Co. No. 2 State-Shugart, C NW SE Section 34-17s-34e, flowed 40 bbl. of oil hourly for 3 hours from top of pay reached at 4,440 ft. Gas was gaged at 500,000 cu. ft. Total depth was 4,690 ft.

Shell Oil Co. No. 2-T State, C NW SE Section 33-17s-35e, had top of pay at 4,465 ft., total depth at 4,655 ft. and swabbed and flowed 58 bbl. of oil the first hour. The well flowed 255 bbl. in 7 hours, initial potential; 38.4 gravity.

Carper Drilling Co. No. 1 Simon, C NE NE Section 27-17s-32e, Maljamar area, had top of pay at 3,559 ft., total depth at 3,672 ft. and after setting 2-in. tubing at 3,685 ft. flowed 78 bbl. of oil daily.

Magnolia Petroleum Co. No. 5 Carson, C SW NE Section 33-21s-37e, Hardy area, set 2-in. tubing at 3,768 ft. and flowed 420 bbl. of oil per day after being shut in for 20 days. Top of pay was 3,677 ft., total depth was 3,770 ft.

The Texas Co. No. 2-B Falby, C SE SW Section 8-22s-37e, Penrose area, had total depth at 3,720 ft., plugged back to 3,681 ft. and flowed 10 bbl. of oil and salt water in 11 hours from pay at 3,625 ft.

Repollo Oil Co. No. 4-B Whitten, NE NE SE Section 4-24s-36e, Cooper area, was recompleted and swabbed 75 bbl. of oil in 24 hours. Previous total depth was 3,755 ft. The well was plugged back to 3,599 ft., and drilled out to 3,616 ft.

Anderson-Prichard Oil Co. No. 1 State A-32, C SW NW Section 32-24s-37e, Mattix area, had pay at 3,435 ft., total depth in sand at 3,549 ft. and flowed 36 bbl. of oil in 24 hours.

Humble Oil & Refining Co. No. 2-L State, C SE NE Section 32-24s-37e, flowed 20 bbl. of oil in 12 hours through choke on 2-in. tubing set at 3,524 ft. Top of pay was 3,480 ft., total depth was 3,550 ft.

Montecito Corp. No. 2 Woolworth, NE SW SW Section 33-24s-37e, found pay at 3,485 ft. and was bottomed at 3,543 ft. Two-inch tubing was set at 3,493 ft. and after shooting flowed 150 bbl. of oil per day.

Anderson-Prichard Oil Co. No. 8 Wells, C N½ NE NW Section 4-25s-37e, Langlie pool, found pay sand at 3,485 ft., had total depth in lime at 3,552 ft. and flowed 402 bbl. of oil in 6 hours through 1-in. choke on tubing. Gas gaged 900,000 cu. ft. daily.

Eddy County

Three completions for the week in Eddy County were: Allen, Fair & Pope No. 2-A State, SE SW SW Section 36-17s-29e. Pay was reached at 2,672 ft. and flowed 107 bbl. of oil in 6 hours. Total depth was 2,699 ft.

Repollo Oil Co. No. 4-A Keel, SE NE SW Section 7-17-31, flowed 60 bbl. of oil daily from pay topped at 3,450 ft. Total depth was 3,586 ft.

Adkisson Oil Co. No. 1 Brainard, SE SW SE Section 5-18s-27e, had total depth in lime at 2,002 ft. The well was abandoned as salt water filled the hole.

Lea County

Magnolia Pet. Co. No. 1-S State, C NE SW Sec. 34-16-34. Drlg. 5,061 ft.
Amerada Pet. Co. No. 2 State, C NE SW Sec. 1-17-36. S.D. 3,590 ft.
Drlg. & Exploration No. 2 State, SE SE SW Sec. 22-17-35. Loc.
Drlg. & Exploration No. 1-E State, C SW SE Sec. 24-17-34. Loc.
Drlg. & Exploration No. 1-O State, NE NW NE Sec. 34-17-34. Drlg. 3,654 ft.
Phillips Pet. Co. No. 2 Mable, C NW NW Sec. 35-17-34. Drlg. 4,338 ft.
Phillips Pet. Co. No. 30 Santa Fe, C SW NW Sec. 26-17-35. Loc.
Shell Oil Co. No. 3-N State, C SW NE Sec. 28-17-35. Drlg. 3,980 ft.
Humble O. & R. Co. No. 6-K State, C SE SE Sec. 32-17-35. S.D. rprs. 928 ft.
Paul Love No. 3 Pearsall, C NW NW Sec. 33-17-32. Drlg. 2,000 ft.
Magnolia Pet. Co. No. 1 Selby, C NW NE Sec. 7-17-37. Drlg. 5,008 ft.
Magnolia Pet. Co. No. 34 State-Bridges, C SE SW Sec. 14-17-34. Drlg. 3,965 ft.
Magnolia Pet. Co. No. 35 State-Bridges, C NE SW Sec. 26-17-34. Drlg. 3,460 ft.
Magnolia Pet. Co. No. 36 State-Bridges, C NW NW Sec. 25-17-34. Drlg. 3,442 ft.
Magnolia Pet. Co. No. 2-R State, C NE SE Sec. 1-17-36. Drlg. 4,235 ft.
Maljamar O. & G. Co. No. 2-B Baish, C NE NE Sec. 27-17-32. T.D. 3,996 ft.; rng. csg.
Maljamar O. & G. Co. No. 2 Mitchell, SW SE SW Sec. 5-17-32. Drlg. 4,367 ft.
Ohio Oil Co. No. 3 State-Warn, C SW NE Sec. 33-17-35. W.O.C. 510 ft.
Shell Oil Co. No. 2-N State, C SE NE Sec. 28-17-35. Drlg. 4,422 ft.
Shell Oil Co. No. 3-N State, C SW NE Sec. 28-17-35. W.O.C. 4,300 ft.
Skelly Oil Co. No. 1-P State, C NW NW Sec. 33-17-35. Drlg. 3,449 ft.
Standard of Texas No. 4 State Lease 5, C NE NW Sec. 27-17-35. W.O.C. 4,200 ft.
Texas Co. No 4-N State, C NW NW Sec. 30-17-35. Drlg. 1,400 ft.
P. B. English No. 1 Miller, C NE SE Sec. 18-19-32 (wildcat). H.F.W.; drlg. 3,598 ft.
Continental Oil Co. No. 7 Britt B-15, C W½ SE SW Sec. 15-20-37. R.U.R.
Phillips Pet. Co. No. 4 Hobbs, C SE SW Sec. 18-20-37. T.D. 3,745 ft.; W.O.D.P.
Aloco Oil Co. No. 3-B Carson, C NW NE Sec. 33-21-37. Drlg. 3,240 ft.
Danglade & Clower No. 2 Owen, C W½ NW SW Sec. 34-21-37. Drlg. 3,633 ft.
Humble O. & R. Co. No. 1 Hardison, C SW NE Sec. 34-21-37. T.D. 3,730 ft.; shot; swbg.
Magnolia Pet. Co. No. 3 Marshall, C NW NW Sec. 34-21-37. Drlg. 2,778 ft.
Skelly Oil Co. No. 2-K State, C NW NW Sec. 32-21-37. Drlg. 2,635 ft.
Stanolind O. & G. Co. No. 5-C Hill, C NW NE Sec. 5-21-37. T.D. 3,600 ft.; R.U.S.T.
Wilson Oil Co. No. 1 Shell-State, C NE SW Sec. 7-21-35. Loc.
Cities Service No. 1-N State, NE SE SW Sec. 2-22-36. M.I.M.
J. C. Clower No. 2-B Christmas, SE NE SW Sec. 28-22-37. Drlg. 1,040 ft.
Gulf Corp. No. 6-E Mattern, SW SE NW Sec. 12-22-36. Rng. csg. 3,675 ft.
Osage Drlg. No. 1 Christmas, NE NE SE Sec. 17-22-37. Loc.
Peters & Elder No. 3 Brunson, SW SW SW Sec. 3-22-37. C.&P.
Repollo Oil Co. No. 3 State Lease 157-D, NW NW SE Sec. 12-22-36. Drlg. 2,692 ft.
Lem Peters No. 3 T. O. May, SW SW NE Sec. 34-22-37. Spd.
Texas Pacific C. & O. Co. No. 17-A State, SE SE NE Sec. 11-22-36. Drlg. 2,755 ft.
Anderson & Prichard No. 2 Blinebry, C SE SW Sec. 29-23-37. R.U.R.
Continental Oil Co. No. 2 Lynn A-28, C NW SE Sec. 28-23-36. Drlg. 3,468 ft.
Culberson & Irwin No. 1 Carter, C NE NE Sec. 25-23-36. C.&P.
Great Western Prod. No. 3-B Leonard, SW NE NW Sec. 32-23-37. T.D. 3,564 ft.; F. 91 B.O. in 24 hours.
Great Western Prod. No. 4-B Leonard, C SE NW Sec. 32-23-37. Loc.
Skelly Oil Co. No. 4 Simms, SW NE SE Sec. 3-23-37. T.D. 3,660 ft.; will not F.; S.D.O.
Skelly Oil Co. No. 2-A King, C NW SW Sec. 33-22-37. W.O.C. 125 ft.
Addison Oil No. 4 Knight, C SE NW Sec. 27-24-37. Drlg. 2,700 ft.
Anderson-Prichard No. 1 State B-32, SW NW SE Sec. 32-24-37. Loc.
Anderson-Prichard Oil Corp. No. 2 State A-32, C SE NW Sec. 32-24-37. Drlg. 3,428 ft.
Continental Oil Co. No. 2 Jack A-29, NE NE SE Sec. 29-24-37. R.U.
Continental Oil Co. No. 5 Jack A-20, Sec. 20-24-37. Drlg. 3,345 ft.
Culberson & Irwin No. 1 Martin, SE SE NE Sec. 31-24-37. Spdg.
Humble O. & R. Co. No. 1-L State, C NE SE Sec. 32-24-37. T.D. 3,560 ft.; P.B. 3,551 ft.; acdz.; swbg.
Gulf Oil Corp. No. 2 Carr, C SW NW Sec. 10-24-37. M.I. drk.
C. B. King No. 1 Harrison, C SE NW Sec. 30-24-37. Drlg. 3,250 ft.
Phillips and Pure No. 8 Woolworth, C NW NE Sec. 33-24-37. Drlg. 2,732 ft.
Repollo Oil Co. No. 4-B Whitten, NE NE SE Sec. 4-24-36. T.D. 3,765 ft.; P.B. 3,660 ft.; S.D.O.
Schermerhorn Oil Co. No. 7 Woolworth, C SE SE Sec. 28-24-37. Drlg. 2,965 ft.
Skelly Oil Co. No. 2-M State, C NW SW Sec. 32-24-37. R.U. spdr.
Weier Drlg. Co. No. 4 Woolworth, SE NW SW Sec. 28-24-37. Drlg. 3,050 ft.
Anderson & Prichard Oil Corp. No. 9 Wells, C SW NE Sec. 6-25-37. Drlg. 525 ft.
Hershback Drlg. Co. No. 1 Woolworth, NE NE SW Sec. 8-25-37. C.&P.
Bershback Drlg. Co. No. 2 Burleson, C E½ SE NW Sec. 8-25-37. Drk.
Ralph Olson No. 1 Langlie, SE NW NW Sec. 10-25-37. T.D. 3,430 ft.; to test.
Parker Drlg. No. 1-B State, C W½ NE NW Sec. 2-25-37. Drlg. 2,665 ft.
Richmond Drlg. No. 3-A State, C SE SW Sec. 2-25-37. T.D. 3,384 ft.; H.F.O.
Weiner et al No. 4 Smith, NW SE SE Sec. 4-25-37. Drlg. 3,372 ft.

Eddy County

G. R. Burke No. 1 State, NE NE NW Sec. 36-16-24. T.D. 801 ft.; S.D.
Allen, Fair & Pope No. 4-A State, SE SW NW Sec. 36-17-29. R.U. spdr.
B. L. Arnold No. 1 Arnold, NW NW NW Sec. 34-17-30. T.D. 3,360 ft.; S. 21 B.O. in 8 hrs.
Aston & Fair, Inc., No. 1 Hudson, C NE NE Sec. 18-17-31. T.D. 3,533 ft.; P.B. 3,513 ft.; S. 50 B.O.P.D.
Danciger O. & R. No. 5-A Turner, C N½ NW NW Sec. 19-17-31. Loc.
R. W. Fair No. 2 State, SE NW SW Sec. 36-17-29. C.&P.
Friendship Oil Co. No. 1 State, SE SE SW Sec. 36-17-29. T.D. 2,650 ft.; fsg.
Grayberg Oil Co. No. 12 Burch, NW NW SE Sec. 19-17-30. T.D. 3,220 ft.; F. 100 B.O.P.D.
J. E. Hughes No. 3 Brooks, NE NW NW Sec. 19-17-28. Drlg. 475 ft.
C. L. Jones No. 1 Harbold, NE NE NE Sec. 26-17-27. S.D. 488 ft.
F. G. Keyes No. 3 State, NE SW NE Sec. 9-17-28. Drlg. 590 ft.
Nash et al No. 9-A Jackson, C N½ NW NE Sec. 24-17-30. T.D. 3,510 ft.; F.&S. 85 B.O.P.D.
R. L. Newberry No. 2 Saunders, NE SE SE Sec. 13-17-27. T.D. 490 ft.; to P.B.
Plains Prod. No. 1 Daugherty (wildcat), SE SE SE Sec. 11-17-27. T.D. 428 ft.; W.O.C.
Premier Pet. Corp. No. 1-F Beeson, SW NW SW Sec. 31-17-30. T.D. 2,794 ft.; F. 268 B.O. in 24 hrs.
Premier Pet. Co. No. 2-F Beeson, SW SW SW Sec. 31-17-30. C.&P.
Repollo Oil Co. No. 3 West, NE NE NE Sec. 3-17-31. Drlg. 4,360 ft.
Repollo Oil Co. No. 6-A Parke, NW SW NW Sec. 22-17-30. T.D. 460 ft.
Republic Prod. No. 3-B Robison, SE SE SE Sec. 35-17-29. Bldg. roads.
W. K. Royalty No. 3-B State, C NE NW Sec. 16-17-31. Drlg. 3,709 ft.
H. T. Clark et al No. 1 Massie, C SW SW Sec. 27-18-29. S.D. 894 ft.

Continental et al No. 1 Brainard, NE NE NF Sec. 11-18-19. Drlg. 2,215 ft.
Continental et al No. 1 Travis, SE SE SE Sec. 3-18-29. Drlg. 40 ft.
J. H. Steinberger No. 2 Hastie, SW SW SW Sec. 18-17-28. T.D. 560 ft.; B. 6 B.O.P.D.
L. E. Elliott No. 1 Elliott, SE SE SE Sec. 24-18-29. Drlg. 2,205 ft.
Etz & Cone No. 1 Nelson, SE SE NE Sec. 10-18-30. Drlg. 3,178 ft.
R. W. Fair No. 1 State, NE NE SW Sec. 1-18-29. 2,000 ft. O.I.H.; drlg. 2,761 ft.
Farmer & Tallmadge No. 1 Hubbell, NE SW Sec. 4-18-25. U.R. 722 ft.
Franklin Pet. Corp. No. 1 Cappedge, NW SW NW Sec. 5-18-30. T.D. 2,882 ft.; S. 4 B.W.P.H.
Green Bay-Paton No. 1 Erwin, C SW SW Sec. 9-18-31. T.D. 3,186 ft.; F. 96 B.O. in 2 hrs.
H. W. Martin No. 1 Gates, SE SE SW Sec. 15-18-30. T.D. 3,244 ft.; rng. csg.; 800 ft. O.I.H.
Me-Tex et al No. 1-B Ballard, C NW NW Sec. 8-18-29. Drlg. 585 ft.
Me-Tex et al No. 1 ates, C SW SE Sec. 5-18-29. Drlg. 2,120 ft.
Plains Prod. No. 1 Swearingen, C NW NE Sec. 14-18-31. Drlg. 3,813 ft.
G. V. Price No. 2 Massie, SE SE NW Sec. 22-18-29. Drlg. 2,665 ft.
Martin Yates No. 1 Saunders, NE NE NE Sec. 12-18-29. T.D. 3,200 ft.; C.O.
Rhodes Drlg. No. 2 Swearingen, C NE NE Sec. 14-18-31 (wtr. well). Drlg. 2,445 ft.
Texwell Corp. No. 1 Sullivan, C SE SW Sec. 23-18-31. Drlg. 3,340 ft.
Fred Turner No. 1 Nickson, C NE NE Sec. 30-18-26. Drlg. 100 ft.
Underwood & Sanders No. 1 Miller, C SE NE Sec. 5-18-29. Drlg. 2,532 ft.; 1,200 ft. O.I.H.
Underwood & Sanders No. 1 Guy, SE NW NW Sec. 10-18-29. Drlg. 1,440 ft.
Underwood & Sanders No. 1 Langford, C SW SW Sec. 9-18-29. Drlg. 2,365 ft.
Me-Tex Supply Co. No. 1 State, NW NW NW Sec. 2-19-31. Drlg. 3,310 ft.
Trojan Oil Co. No. 1 Grant, SW SW NE Sec. 33-20s-25e. Drlg. 897 ft.
Geo. L. Roundey No. 1 Roundey, C SE SW Sec. 8-23-26. Drlg. 880 ft.

Chaves County

Mac T. Anderson No. 1 Warnock, C SW SE Sec. 17-15-27. Drlg. 1,680 ft.
R. M. Baker No. 1 Baker, NW NW NW Sec. 19-10-30. Rig comp.; M.I. tools.
Comanche Drlg. No. 1 Campbell, NE NE NW Sec. 15-11-26. T.D. 1,343 ft.; drlg. plug. (cor.).
Nay Hightower No. 1 Billingslea, C SW NE Sec. 28-11-30. T.D. 3,445 ft.; P.B. 3,430 ft.; B. est. 50 B.O.P.D.
New, Russell & Wood No. 1 Sterrett (wildcat), NW SE NW Sec. 29-11-25. T.D. 958 ft.; C.O.&P. 5-8 B.F.P.D.; to D.D.
Tarkenton Bros. No. 1 Peters, SE SE NW Sec. 33-11-25. S.D. 910 ft.
Western Minerals, Inc., No. 1 Dow (wildcat), C SW NW Sec. 27-10-30. Drlg. below 1,800 ft.

Luna County

O. D. Berry No. 1 Berry, SE SE SW Sec. 33-22s-10w U.R. 6 in. 710 ft.

NORTHWEST NEW MEXICO

Bernalillo County

Norins Realty Co., Inc., No. 2 Pajarita, Sec. 22-9n-1e. Drlg. below 1,450 ft.

San Juan County

Continental Oil Co. No. 92 Rattlesnake, C W½ W½ Section 1-29n-19w, Rattlesnake pool, was completed in the Dakota at 850 ft., for 47 bbl. per day.

Continental Oil Co. No. 93 Rattlesnake, C SW NW Sec. 1-29n-19w. Loc.; (first report).
Angel Peak Oil Co. No. 8 Govt., C NE SW Sec. 13-28n-11w. Drlg. 155 ft.
Al Greer No. 2 Thompson, SW SE SW Sec. 10-30n-11w. S.D. 1,125 ft. for 6⅝-in. for W.S.O.
Geo. Goodwin No. 1, NE NW NW Sec. 16-30n-11w. Drlg. sh. 1,350 ft.; H.F.W.

San Miguel County

Ben E. Keith No. 1 McCune, SW SE SW Sec. 32-16n-12e. S.D. 400 ft.; repairs.
Southwest Drlg. Co. No. 1 Conchas, NW NE Sec. 34-17n-21e. T.D. 2,100 ft.; fsg.

Torrance County

Drice Co. No. 1 Garland, NE SE Sec. 32-7n-7e. Drlg. 1,990 ft.; 5-⅛-in. at 1,965 ft.

Valencia County

C. A. Grober et al No. 1 Fuqua, NE NE Sec. 19-5n-3e. Cmtd. 8¼-in. at 2,295 ft.; W.O.C.
Joiner Oil Corp. No. 1 San Clement, C NE SE Sec. 23-7n-1e. T.D. 5,606 ft.; set whpstk.; drlg. by D.P.

COLORADO

Adams County

Derby Dome O. & G. Co. No. 2 Baxter, C SE SW Sec. 2-3s-66w. Bldg. rig.

Boulder County

J. A. Warren No. 3 Maxwell, NW NE NW Sec. 24-1n-17w. S.D. temp. at 165 ft.
Reynolds & Rohr No. 1 Thomas, SW SW Sec. 17-1n-70w. S.D.O. 2,138 ft.; will D.D. under management of Reynolds.

Fremont County

T. E. Maloney No. 1, SE SW Sec. 34-19s-69w. Drlg. 735 ft.
Waterville Oil Co. No. 2 Persons, CWL NE NE Sec. 17-19s-69w. T.D. 125 ft.; fsg.

Garfield County

Roaring Fork Oil Co. No .1 Patterson, C NE Sec. 36-7s-88w. Drlg. 2,142 ft. in blk. limey sh., lower Penn.; 5-⅛-in. at 1,724 ft.

Huerfano County

J. W. Tomkins & Sons No. 2 Ojo, SE SE SE Sec. 3-29s-69w. T.D. 805 ft.; rng. 8¼-in.
S. W. Pressey No. 3 Ojo, NW NW Sec. 11-29s-69w. Drlg. 200 ft.
S. W. Pressey No. 2 Alamo, C SW SE Sec. 3-27s-68w. S.D. 1,910 ft.

Miller & Hall No. 1 Hamilton, SE NW Sec. 28-29s-67w. T.D. 670 ft.; rng. cave string.
Baker-Dunigan No. 1 Firm Bros., SE NE Sec. 3-29s-69w. Spd. to 150 ft. and S.D. for heavier rig.

La Plata County

Nick Splatter No. 1-X Bryce, C SW SW Sec. 32-33n-9w. T.D. 2,352 ft.; fsg.

Mesa County

The Divide Creek test of the Continental Oil Co., joint with the California Co. and the Amerada Petroleum Corp., chalked up a record with the deepest hole drilled in Colorado and the second deepest in the Rocky Mountain area when it passed the 10,000-ft. mark. The deepest was the California Co. No. 1 Kamp, Section 3-154n-96w, Nesson anticline, Williams County, North Dakota, which was abandoned last fall at 10,281 ft. The Divide Creek well also holds another record, as far as available data indicates, in its elevation, which is 9,395 ft. above sea level, believed to be the highest of any drilling well. At last report it was drilling at 10,086 ft., or only 691 ft. below sea level.

Continental Oil Co. et al No. 1 Miller, SW SW NW Sec. 36-8s-91w. Drlg. blk. limey sh. 10,086 ft.

Moffat County

Cooperative O. & G. Co. No. 1 Gossard, CWL E½ E½ Sec. 29-5n-93w. Spd. and S.D. to complete R.U.
C. R. Privett No. 1 Sutton, NE NE SW Sec. 1-5n-96w. T.D. 1,263 ft.; pulled and rerun 8¼-in. to 1,198 ft.; U.R. to bttm.
J. S. Warner No. 1 Baker, NE NE SW Sec. 35-5n-96w. Spd. and S.D.

Park County

South Park Oil Co. No. 1 Lemar, NE NE SE Sec. 34-11s-75w. T.D. 6,975 ft.; fsg. blr.

Pueblo County

Eden O. & G. Co. No. 1 Horse Creek Ld. & Cattle, SW SE Sec. 29-19s-64w. Drlg. fine sd. 2,185 ft.; (C.D.).

Rio Blanco County

Texas Co.-California Co. No. 2 Unit, NW SE SW Sec. 27-3n-94w. Drlg. 3,434 ft.
Buford Oil Co. No. 1 Govt., C SW SW Sec. 16-1n-91w. T.D. 3,645 ft.; W.O. 6¼-in.

WYOMING

Big Horn County

Ohio Oil Co. No. 1 Syverson, Sec. 34-54n-93w (SE SW NW Lot 53). T.D. 2,164 ft.; cmtd. 10¾-in. 2,068 ft.
Frank S. Scott No. 1 Robertson, SE SE SE Sec. 6-54n-93w. Drlg. 417 ft.
Mule Creek Oil Co. No. 1 Sessions, Lot 53 (NW NW) Sec. 34-56n-97w. Drlg. L.&sd. 3,756 ft.
A. L. Rankin No. 1 Karjala-Rankin, C SW NW Sec. 10-

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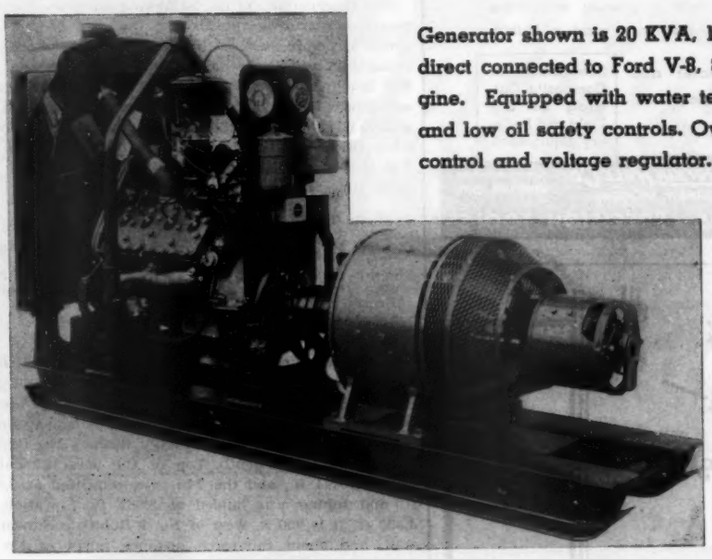

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54n-94w. T.D. 790 ft.; M.I. 6⅝-in. to set on bttm. for W.S.O.; T. Embar 180 ft.; Tensleep 481 ft.; Amsden 755 ft.
Libby-Keoughan No. 1 Sheets, SE NE SE Sec. 9-55n-96w. Drlg. 3,060 ft.

Carbon County

Sinclair-Wyoming Oil Co. No. 13 Wertz, NE NW NW Sec. 7-26n-89w. Drlg. 4,440 ft.; (C.D.).
Producers Oil Co. No. 1 Lake Valley, CNL Sec. 14-20n-88w. Drlg. gr. sh. 2,550 ft.; carrying 10-in. at 2,485 ft.

Converse County

New Era Fuel Co. No. 1 Simonson, NW NE SE Sec. 16-32n-68w. Drlg. 715 ft.
Wyshawn Oil Co. No. 2 Lindley, C SW SW Sec. 35-32n-69w. Drlg. 2,613 ft.
W. W. Austin et al No. 1 Pfister, SW NE NW Sec. 20-32n-68w. T.D. 713 ft.; cmtd. 5-⅛-in. at 710 ft.; S.G. in sdy. sh. 710-13 ft.
New Era Fuel Co. No. 2 Gasper, CNL NW SW Sec. 25-32n-69w. Cg. 750 ft.
New Era Fuel Co. No. 1 Pestal, SE NE NE Sec. 32-32n-69w. C.O. 420 ft. to run 8¼-in.; (formerly Fred Bunker).

Fremont County

Sinclair-Wyoming Oil Co. No. 11, CSL NE NE Sec. 15-32n-95w, Big Sand Draw gas field. M.I.M.; (first report).
Hall & Olinger No. 5 Govt., NW NE Sec. 33-38n-93w. S.D. 254 ft.
Lincoln O. & G. Co. No. 5 Tribal, C SW SE Sec. 23-1s-1e. Drlg. 919 ft.
Pilot Oil Co. No. 8 Hoffman, C SW SW Sec. 22-3n-1w. Drlg. gr. sh. 650 ft.
Consolidated Oil Properties No. 3 Ewart, C SW SE Sec. 16-1n-1w. T.D. 1,245 ft.; U.R. 6⅝-in. at 1,000 ft.
Frank Pouppirt No. 2 Fidelity Tr., NW NW SW Sec. 27-3n-1w. S.D. 1,200 ft.

Hot Springs County

Phebus Oil Co. No. 2 Govt., NW SW SW Sec. 11-44n-98w. T.D. 1,100 ft.; swdg. out kink in 12½-in. joint.

Lincoln County

H. C. Harris et al No. 1 Govt., SE NW NW Sec. 23-21n-117w. T.D. 1,916 ft.; rng. 8⅝-in. to bttm.

Natrona County

The Continental Oil Co. is making an extensive seismograph survey of the area to the west of the Cole Creek structure, where the General Petroleum Corp. brought in a discovery last year, and northwest of the Big Muddy field, including the Geary, North Geary, and South Geary domes, a series of structures on an anticline running southeast from the Midway dome, where Sid Keoughan has some production, toward the Big Muddy field. Shooting has been in progress for some time and is nearing completion.

Connelly Drlg. Co. No. 1 State, SW SW NW Sec. 36-36n-81w. T.D. 1,268 ft.; M.I. 10-in.
General Pet. Corp. No. 1 Govt., C NW SE Sec. 21-35n-77w. T.D. 8,511 ft.; P.B. to 7,974 ft.; fsg. bir.
Summit Oil Co. No. 2 Govt., NW NE NE Sec. 21-33n-80w. Drlg. 430 ft.; 8¼-in. at 426 ft.; S.G. in upper Frontier at 428 ft.

Niobrara County

The Lance Creek field chalked up one completion in the Continental Oil Co. No. 9 Otto Rohlff, SE NE SE Section 31-36n-65w, an outside well on the northwest flank of the field, drilled to the Sundance sand. It flowed 30 bbl. an hour initially through the tubing at 3,937 ft., total depth. Top of the basal Sundance was at 3,894 ft., and the 7-in. was cemented at 3,880 ft. and tubing was landed at 3,931 ft. Elevation is 4,395 ft. It is 990 ft. west of No. 7 Rohlff, a Sundance well, and about the same distance north of No. 8 Rohlff, the nearest producers.

The Continental No. 3-B Dielman, SW SE NW Section 8, was drilled to 5,698 ft. where it encountered water in a sand below the Leo which has been named the Joss sand. It plugged back to 5,565 ft. and is running tubing to test the Leo zone. The Joss sand is a new producing horizon in the field found in the Minnelusa Oil Corp. No. 2 Joss, SE NE SW Section 6, which was completed last month at 5,352 ft. for 30 bbl. an hour.

The Minnelusa Oil Corp. No. 1 Marline, an important outpost well, is due to drill into the Leo sand soon. It is located on the southeastern side and appears to be running favorably.

Holly Dev. Co.-A. B. Cobb No. 4 Novick, SE SE SW Sec. 6-35n-65w. Drlg. 478 ft.; 13⅜-in. 322 ft.; 225 sacks.
Ohio Oil Co. No. 3 Cash-1, SW NW SW Sec. 4-35n-65w. Drlg.; W.O. equip.
Minnelusa Oil Corp. No. 1 Marline, NW SW SW Sec. 4-35n-65w. Drlg. 5,385 ft.
Ohio Oil Co. No. 12 Elizabeth Lamb-Acct. 2, NE SE SE Sec. 5-35n-65w. Rig; W.O. equip.
Continental Oil Co. No. 4 Apex O.P.C.-3, NW NE SW Sec. 34-36n-65w. Drlg. sh. 2,820 ft.
Continental Oil Co. No. 6 Rodeo-4, NW NW NE Sec. 35-36n-65w. Drlg. sh. 2,545 ft.
Continental Oil Co. No. 3-B Dielman, SW SE NW Sec. 8-35n-65w. T.D. 5,698 ft.; P.B. to 5,565 ft.; tbg. to tst.
Continental Oil Co. No. 16 Tom Bell Cattle, NW SW SW Sec. 34-36n-65w. R.U.R.
Argo Oil Corp. No. 1 U. S.-40, NW NW SW Sec. 8-35n-65w. Drlg. 3,210 ft.
Continental Oil Co. No. 4 Apex O.P.C.-4, SE SE NW Sec. 35-36n-65w. T.D. 4,128 ft.; drlg. by at 4,019 ft.
Continental Oil Co. No. 15 Tom Bell Cattle, C SW SW Sec. 34-36n-65w. T.D. 5,488 ft.; set whpstk. and drlg. by.
Ohio Oil Co. No. 11 Putnam, SE SE SW Sec. 33-36n-65w. T.D. 5,345 ft.; cmtd. 7-in. 5,316 ft. with 325 sacks; W.O.C.
F. F. Hintze et al No. 1 Wright-Govt., C NW SE Sec. 30-36n-63w. T.D. 4,964 ft.; cmtd. 7-in. at 4,617 ft. and S.D.
Fall River Roy & Prod. Co. No. 1 Govt., CSL SE SE Sec. 35-40n-61w. Drlg. 1,750 ft.; 10-in. cmtd. 1,730 ft. for W.S.O.

Park County

The Resolute Oil Co. No. 2 State, C SW SW Section 16-57n-101w, Badger Basin field, which has been testing for some time at 8,690 ft., is reported unofficially to have been completed in the Frontier at that depth for 250 bbl. per day. The 6⅝-in. is at 8,330 ft. It is a south offset to No. 1 State.

Dry Creek Oil Co. No. 1 State, C NE NW Sec. 16-50n-100w. T.D. 1,280 ft.; T. Frontier 1,270 ft.; cmtd. 8¼-in.; W.O.C.

Sublette County

The Texas Co. joint test with the Frontier Petroleum Co. on the Dry Piney structure made a drill stem test at 8,194 ft., total depth, which showed 500 bbl. of hot sulfur water per day. It was then plugged back higher up in the Aspen without results, and again plugged back to 6,800 ft. and will test the Frontier sands in various stages. This well was drilled to 5,902 ft. by the Frontier company where it had a gas blowout which caused the hole to crater. The Texas Co. made a deal to take over the well and complete. After killing the gas and erecting heavier equipment, tests indicated that the gas was coming from an upper sand. No reliable gage was obtained but it was estimated that it did not exceed 10,000,000 cu. ft. per day. The Frontier at this location is approximately 2,500 ft. thick and the series of sands, in which some shows of oil were encountered, will be tested.

The Wyoming Petroleum Co. No. 1 Charles Budd, on South Piney Creek, which also had a blowout at 1,792 ft. in December and which resulted in the entire rig being encased in solid ice, has resumed drilling and is expected to reach a sand at around 2,000 ft. which shows a little oil in the old Corder well, less than a mile to the west. The Corder hole is reported to have several hundred feet of oil standing in with three strings of tools lost in it. This well was started 10 years ago and never got below 2,760 ft.

One new operation was reported in this district in the J. C. Anderson Drilling Co. No. 1, in the town of Marbleton.

J. C. Anderson Drlg. Co. No. 1, W½ NE Sec. 30-30n-111w. Bldg. rig; C.T. test to 2,000 ft.; (first report).
California Co. No. 1 Unit 1, C SW NE Sec. 14-31n-109w. Drlg. 6,555 ft.
Wyo. Pet. Corp. No. 1 Budd, C NE NE Sec. 10-29n-113w. Drlg. below 1,792 ft.
Texas Co.-Frontier Pet. Co. No. 1 Govt. Unit, SE SE SW Sec. 1-28n-114w. T.D. 8,194 ft.; P.B. and tstg.
Yellowstone Oil Co. No. 1 Budd, C SE SE Sec. 6-30n-112w. Drlg. 210 ft.

Sweetwater County

Mountain Fuel Supply Co. No. 1 Clark, NW SE SW Sec. 12-19n-104w. Drlg. 2,175 ft.
Mountain Fuel Supply Co. No. 1 Stone, C SW SW Sec. 18-19n-103w. T.D. 4,546 ft.; cmtd. 6-in. lnr. 3,494-4,118 ft.; perf. below 4,010 ft.; showed sulfur wtr.; will perf. at 4,000-10 ft.
Sinclair-Wyoming Oil Co. No. 84-A, SW NW NW Sec. 11-26n-90w. Drlg. 630 ft.

Uinta County

Spring Valley Pet. Co. No. 13, CSL SE SE Sec. 22-15n-117w. R.U. to D.D. from 1,726 ft.; O.W.D.D.

Weston County

Dornacher & Neiman No. 1 Neiman, NW NW NW Sec. 6-47n-64w. Drlg. 300 ft.
Lem Johnston No. 1, NW SW Sec. 24-44n-63w. Drlg. 3,305 ft.
John Brorphy No. 1 George, SW SE NW Sec. 12-48n-64w. Drlg. below 2,430 ft.
F. P. Dilger et al No. 4 Ost, CNL NE NE Sec. 25-46n-64w. Cg. in Sundance below 2,300 ft.
Hunter & Satterlee No. 1 Draper, NW NW NW Sec. 10-46n-63w. S.D. 160 ft. (C.D.) for repairs.
Kroker et al No. 2, CNL NE NW Sec. 31-47n-63w. Drlg. below 345 ft.; S.G.; no oil.
Updike Co. No. 7, NW NW SW Sec. 25-46n-64w. R.U.; (first report).
Federal Oil Co. No. 9, CNL SE SE Sec. 15-46n-64w. Drlg. 1,900 ft.

MONTANA

Carbon County

R. R. Tarrant No. 2 McKay, C SE NW Sec. 4-6s-18e. T.D. 1,535 ft.; 10-in. at 1,382 ft.; drlg. by plug.
Alex Benton No. 1, CSL SE SE Sec. 23-6n-23e. Drlg. 1,600 ft. in 8¼-in. hole.
Miracle Oil Co. No. 2 Govt., CWL NE SE Sec. 3-6s-23e. T.D. 2,381 ft.; fsg.; tools stk. at 1,600 ft.

Fallon County

Montana-Dakota Utilities Co. No. 137 Govt. Unit 7, NE SW SW Sec. 10-6n-60e. Drlg. 670 ft. in Bearpaw; 10¾-in. at 104 ft.

Glacier County

The Cut Bank field showed considerable activity with three completions, one of which was a dry hole,

five new operations, and one near completion showing for a commercial well in the Sunburst sand.

Nadeau Brothers No. 2 Government, C SW NW Section 24-37n-5w, had the Moulton sand at 2,560-2,604 ft. and on a drill stem test was estimated at 2,000,000 to 4,000,000 cu. ft. per day. It then cored the Sunburst at 2,658-96 ft. and cores showed some saturation. It was completed at that depth and swabbed 90 bbl. the first 48 hours. It is a little less than 1½ miles southwest of Chandler & Newell No. 1 Hinstrager, completed last month at 2,603 ft. for 43,000,000 cu. ft. of gas in the Moulton sand.

The Texas Co. No. 2 Hessler, CSL NE NE Section 19-33n-5w, swabbed 79 bbl. the first 24 hours and pumped 52 bbl. in 24 hours at 2,972 ft., total depth. It had the Cut Bank sand at 2,940-67 ft. with the main pay at 2,962-67 ft. The 7-in. casing was cemented at 2,944 ft.

R. C. Tarrant No. 4 State, SE NE SE Section 36-34n-6w, had only 100 ft. of oil in the Cut Bank at 2,830-72 ft. and was plugged and abandoned at a total depth of 2,890 ft.

The Glacier Production Co. No. 1 Larson, CEL NE NW Section 35-36n-6w, is a near completion and showing for a commercial well in the Sunburst sand. It had the top of the sand at 3,020 ft., where the 7-in. pipe was cemented, and was drilled to 3,030 ft. At 3,022-28 ft. oil rose 1,600 ft. in the hole and it swabbed 150 bbl. in 12 hours and was swabbing at the rate of 10 bbl. an hour at the end of the period. The location is ¾ mile north and a little west of the same company's No. 1 Hall, C SW SE Section 35, which swabbed 312 bbl. initially in 24 hours from the Cut Bank sand when completed in 1935. This is the nearest producer in the field proper to the new well and is far south of the North Cut Bank wells. No. 1 Hall was dry in the Sunburst.

A. B. Cobb No. 1 Vargo, a mile northwest of his No. 1 State, a 40,000,000-cu. ft. gas well in North Cut Bank, had a small show of oil, but no gas in the Moulton sand and drilled to the top of the Sunburst at 2,660 ft. where it had a show of oil. It stopped to cement the 7-in. casing at that depth.

R. C. Tarrant No. 5 Reickhoff, CWL NW NE Section 36-32n-6w, is a suspended location.

One of the new locations is the Huber-Montana Co. No. 1 Krueger, in Section 11-37-5, in North Cut Bank. This company is a new entrant in the field, being a subsidiary of the J. M. Huber Corp. It has been incorporated in Montana with a capital of 1,000 shares of no-par value. The company has acquired 7,000 acres in the North Cut Bank district, mostly in Townships 37n-4w and 37n-5w, including the tract upon which is located the Nadeau well, reported a completion in the past week. The directors are E. M. Eckhart, H. W. Price, and Walter F. David, of Borger, Tex.; George Nadeau, of Shelby, and K. D. Pardee and M. M. Newell, Jr., of Cut Bank. The company is reported planning to develop sufficient gas for an absorption and carbon black plant.

Huber-Montana Co. No. 1 Krueger, CWL SW SE Sec. 11-37n-5w. Loc.; (first report).
Texas Co. No. 4 Curran, C NE NE Sec. 8-32n-5w. Drlg. 169 ft.; (first report).
Texas Co. No. 4 State, C NW NW Sec. 16-32n-5w. R.U.; (first report).
Santa Rita O. & G. Co. No. 2 Stahl, C NW SW Sec. 21-35n-5w. Spdg. 150 ft.; (first report).
Par Oil Co. No. 2 Tribal-170, SW NE SW Sec. 7-32n-5w. Loc.; (first report).
Glacier Prod. Co. No. 1 Jaeger, C NW NW Sec. 15-32n-5w. Spdg. 110 ft.
R. C. Tarrant No. 8 Getty, CWL NW SE Sec. 15-34n-6w. Drlg. 920 ft.; Colo. 575 ft.; 10¾-in. 600 ft.
Santa Rita O. & G. Co. No. 2 Jordan, CNL NW SE Sec. 7-32n-5w. Drlg. 2,550 ft.
R. C. Tarrant No. 3 Yunck, SW SW NW Sec. 12-34n-6w. Rig.
Olive Oil Co. No. 5 Winkler, NE NE NE Sec. 35-35n-6w. Drlg. 2,025 ft.
Glacier Prod. Co. No. 1 Larson, CEL NE NW Sec. 35-36n-6w. T.D. 3,030 ft.; tstg.
Glacier Prod. Co. No. 2 Hawkins, NE NE SW Sec. 17-33n-5w. Cmtd. 7-in. 2,928 ft.; W.O.C.
A. R. Pardue No. 2 Tribal-170, NW SW SW Sec. 7-32n-5w. Drlg. 2,575 ft.
A. B. Cobb No. 1 Vargo, C SE NE Sec. 19-37n-4w. T.D. 2,660 ft.; cmtd. 7-in. on bttm.

Meagher County

Dan Drumheller No. 1 Moss Agate, SW SE NE Sec. 25-7n-7e. Drlg. 940 ft.

Teton County

Zodiac Oil Co.-Gulf States Oil Co. No. 1 Kellogg, NE NW NE Sec. 33-28n-5w. T.D. 2,846 ft.; P.B. to 2,690 ft.; shot 5 qt. at 2,680-85 ft.; S.O.; will shoot again.
R. C. Tarrant No. 1 Hoeschen, NE SE Sec. 34-27n-5w. R.O.G.

Toole County

R. G. Parrant No. 1 Holbrook, C NW NE Sec. 2-36n-3w. Drlg. 160 ft.; 12½-in. at 118 ft.
Ramona Oil Co. No. 3 Govt., CWL NE NW Sec. 12-35n-3w. S.D. 1,563 ft.; Sunburst 1,545-63 ft.; 60 ft. O.I.H.
Huso Bros. No. 1 Elingson, C NE SW Sec. 14-35n-3w. Drlg. 715 ft.
Fulton Pet. Co. No. 3 Thompson, SE NE NW Sec. 28-35n-3w. Drlg. 560 ft.; (first report).
Pfabe & Engleking No. 3 Hurley, near C NW NE Sec. 8-34n-2w. S.D. 1,120 ft.
Montana Gas Co. No. 1 Campbell, C NW NE Sec. 19-37n-1e. T.D. 1,760 ft.; cmtd. 7-in.; W.O.C.
Coolidge & Coolidge No. 5-A State, SW SW NW Sec. 36-36n-2w. Drlg. 1,530 ft.; T. Sunburst 1,503 ft.; S.O.; 7-in. 1,503 ft.
O. A. Neusted No. 3 Haugen, NW NE NW Sec. 11-35n-3w. T.D. 1,601 ft. (C.D.); Sunburst 1,560-1,600 ft.; rng. rods and tbg.
Superior Pet. Co. No. 8-A Govt., CEL NW NE Sec. 12-35n-3w. Drlg. 1,720 ft.
G. & A. Oil Co. No. 2 Krause, SE SE SE Sec. 9-35n-3w. T.D. 1,805 ft.; P.B. to break in L. at 1,789 ft.; 2 B.O. P.D.; will acd. 500 gal.
Superior Pet. Co. No. 3 Govt., CEL NW NW Sec. 12-35n-3w. Drlg. 1,470 ft.
Fulton-Commonwealth No. 2 Thompson, SE NE SE Sec. 28-35n-3w. S.I. at 1,728 ft.
W. M. Cassidy No. 1 Phoenix, CNL NW NW Sec. 28-35n-4w. S.D. after D.D. into sat. Mad. L. at 2,325-58 ft.

Yellowstone County

Nelson Story-Hogan, Ltd., No. 1 Stallinberger, NE NE SW Sec. 18-3n-23e. T.D. 5,129 ft.; R.U. to res.; (formerly Signal O. & G. Co.).
Riverton Oil Co. No. 1 Fox, CEL NW NE Sec. 14-2n-23e. Res.; T.D. 1,975 ft.; U.R. 8¼-in. from 1,900 ft. to bttm.
R. C. Tarrant No. 2 Kelly, CEL NW SW Sec. 26-3s-24e. T.D. 920 ft.; fsg. tools.

UTAH

Box Elder County

Northern Oil Co., a Utah corporation, has begun a test on the White Valley structure in Box Elder County, about 10 miles south of the Idaho line and 20 miles north of Bear River Bay of the Great Salt Lake. It will be drilled with cable tools. It is about 25 miles northeast of what is known as the asphalt seeps on the north shore of the lake, where some drilling has taken place in the past.

Northern Oil Co. No. 1, C NE SW Sec. 17-13n-4w. Loc.; C.T. test; (first report).

Grand County

Cane Creek Oil Co. No. 1 Govt., NW SW Sec. 31-26n-21e. T.D. 3,180 ft.; 6⅝-in. cmtd. 3,135 ft.; W.O.C.

Summit County

Longwell Pet. Co. No. 1, SE SW SE Sec. 35-3n-5e. Res. at 2,876 ft.; drlg. 2,965 ft.

Gulf Coast Fields

(Continued from Page 67)

area, Atlantic Refining Co. No. 1-A Rice Land & Lumber Co., Section 22-3s-11w, is drilling in sand and shale below 8,350 ft. The well topped the Wilcox at 8,112 ft. and no showings have been reported in this section. It is scheduled to be drilled to 8,500 ft., and it is possible that casing may be cemented to test a gas and distillate showing in the Sparta formation at 7,585-7,605 ft. South of De Ridder, in Section 23-4s-9w, Standard Oil Co. of California No. 1 Long Bell Lumber Co. is expected to be abandoned at its present depth 10,573 ft.

Continental Oil Co.'s attempt to open Wilcox production on the extreme west side of the Villa Platte field, Evangeline Parish, has apparently failed as two production tests at No. 1 J. E. Vidrine were failures. The hole is bottomed at 10,506 ft., and casing perforated at 10,360-80 ft., and 10,350-60 ft. The sand section is approximately 300 ft. deeper than the company's No. 3

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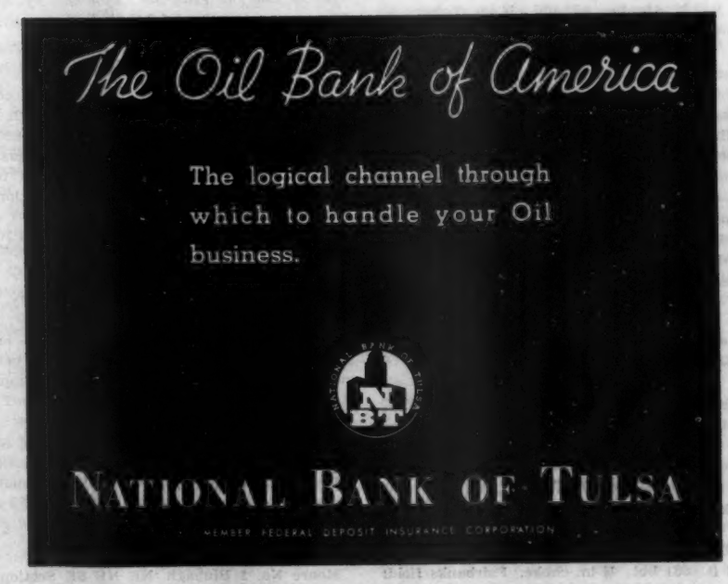
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Hattie Haas, completed the previous week at 10,055-85 ft., to open the first Wilcox production in the field. Main production is from the Sparta sand at 8,900-9,000 ft.

In the Bancroft field, Beauregard Parish, Republic Production Co. No. 7 Lutcher Moore, north of production in Section 14-6s-13w, is bottomed at 8,000 ft., and 5½-in. casing was cemented at 7,963 ft. to test an oil sand at 7,901-08 ft. The showing was cored about 600 ft. deeper than the main producing horizon.

University Field Extended

George Echols extended the University field, East Baton Rouge Parish, a quarter mile to the north with the completion of No. 1 Evan Duplanter, Section 68-7s-1w. Oil sand was cored at 6,496-6,506 ft., the total depth, and the well was completed for an initial production of 240 bbl., flowing through a 5/32-in. choke. The same operator's No. 1 Morgan is bottomed in oil sand at 6,506 ft., with 7-in. casing cemented at 6,481 ft. On the northeast edge of the field, W. V. Bowles No. 1 Richard Community cemented 5½-in. casing at 4,395 ft. to test a new sand at 4,345-55 ft. This well failed to core the 6,500-ft. sand, and casing was cemented after an electrical survey showed 22 ohms resistivity on normal curve, 15 ohms on third curve with 100 millivolts porosity in the 4,300-ft. horizon.

In the Golden Meadows field, La Fourche Parish, M. H. Marr and others No. 1 B. & D. Unit, Section 2-19s-22e, is coring in sand and shale below 8,169 ft. Salt water sand was cored at 7,954-8,062 ft., and the well is reported to be running about 60 ft. lower than Martex Petroleum Co. No. 1 Falgout Holding Co., recently completed at 7,925-55 ft. to open a new horizon.

East of the Bay Brussel prospect, La Fourche Parish, Tide Water Associated Oil Co. staked location for No. 1 Delta Farms, Inc., 1,980 ft. from the north and west line of Section 6-17s-23e.

In the Grand Bay field, Plaquemines Parish, Gulf Oil Corp. No. 4 Grand Prairie Levee District, Section 48-20s-18e, topped oil sand at 8,678 ft., and cored the section to a total depth of 9,700 ft. Seven-inch casing was cemented at 9,664 ft. This is a new sand for the field.

W. T. Burton No. 1 L.&N.R.R., Section 18-11s-15e, Orleans Parish, has attracted much attention due to an attempted blowout at a total depth of 10,138 ft. The well has been showing extremely high gas pressure and considerable weighting material had to be used before it was brought under control. The well has been drilled "tight" and very little information can be obtained about it.

TEXAS GULF COAST COMPLETIONS IN PROVEN FIELDS

Brazoria County

Hastings field: Stanolind Oil & Gas Co. No. 2-A Hiram Moore, sand 6,097-6,102 ft., 430 bbl., ⅛-in. choke. Stanolind Oil & Gas Co. No. 3 W. T. Ware, perforated casing 6,049-78 ft., 623 bbl., ¼-in. choke. West Columbia field: Texas Co. No. 32 Abrams, 452 bbl., ¼-in. choke.

Fort Bend County

Thompson field: H. M. Naylor No. 2 Moody, sand 7,782-7,826 ft., 1,012 bbl., ¾-in. choke. Gulf Oil Corp. No. 12 Hamerstrom, sand 5,356-99 ft., 61 bbl., ¼-in. choke. Boling field: Mackhank Petroleum Co. No. 14-C J. R. Farmer, 4,591 ft., 528 bbl., ¼-in. choke.

Galveston County

Dickinson field: Pure Oil Co. No. 1 Kohfeldt, perforated casing 8,495-8,505 ft., distillate well. Humble Oil & Refining Co. No. 15-A Stewart, 8,921 ft., 456 bbl., ¼-in. choke.

Hardin County

Silsbee field: Humble Oil & Refining Co. No. 4 Kirby, 6,940 ft., 382 bbl., ¼-in. choke.

Liberty County

Hull field: Guinn Crude Oil Co. No. 14-A Abel, sand 742-60 ft., 9 bbl, pumping, 60 per cent water.

Harris County

Clear Lake field: Humble Oil & Refining Co. No. 4 Hutcheson, sand 5,839-44 ft., 120 bbl., ⅛-in. choke. Eureka field: J. W. Frazier No. 7 Hogg, perforated casing 7,700-12 ft., 531 bbl., ¼-in. choke. Fairbanks field: R. A. Johnston and others No. 1 Summer, sand 6,846-48 ft., 77 bbl., ⅛-in. choke. W. S. Noble and others No. 7 Hillegiest, sand 6,830-45 ft., 133 bbl., ⅛-in. choke. W. S. Noble and others No. 6 Hillegiest, sand 6,830-47 ft., 144 bbl., ⅛-in. choke. Friendswood field: Humble Oil & Refining Co. No. 29-B Humble-West, sand 5,898-6,040 ft., 576 bbl., ¼-in. choke. Goose Creek field: Sun Oil Co. No. 4 Smith, 2,727 ft., 106 bbl., pumping.

Oklahoma Fields

(Continued from Page 72)

Dodge No. 18 Payne, C SE SE Section 17-15-14, made a 6-bbl. well after a 60-qt. shot at 820-50 ft. Karam No. 1 Bruner, NW SW SE Section 21-16-14, had Dutcher sand at 1,745-63 ft., and flowed 50 bbl. naturally the first 24 hours.

Creek County

In the old Cushing field, in Creek County, Schafer No. 1-B Wiley, NE NE SE Section 9-17-7, had Bartlesville sand at 2,695-2,778 ft., and after a shot of 40 qt. pumped 16 bbl. of oil and 30 bbl. of water.

In the old Glenn pool, L. B. Jackson No. 25 Collins, NW SW SE Section 8-18-11, had Red Fork sand at 1,610-42 ft. and Glen sand at 1,713-1,803 ft. Both sands were shot, Red Fork with 20 qt. and Glenn with 80 qt., but it made only a 5-bbl. well.

Payne County

In the Yale district, in Payne County, Blackwell Oil & Gas Co. No. 1 Olive, NE SW SW Section 7-19-5, had Wilcox sand at 3,845-49 ft. and 3,865-3,918 ft. The hole filled with water and was plugged back to 3,799 ft. and shot with 20 qt. at 3,784-99 ft. The well pumped 25 bbl. of oil. It was an old well drilled from 3,789 ft.

Pawnee County

Johnson Oil Refining Co. No. 6 Findley, NW NW NW Section 27-20-9, in the Keystone field, flowed 140 bbl. after a 100-qt. shot in Red Fork sand at 3,845-49 ft.

Osage County

Olson Drilling Co. No. 2, NE NE NW Section 24-26-4, made a 10-bbl. well, with a 500,000-cu. ft. gas production, at 3,150-81 ft. Olson Drilling Co. No. 1 Soldone, NW NW NE Section 24-26-4, was dry and abandoned in Mississippi lime at 3,254-70 ft. The Charles No. 1, C S½ NW NW Section 10-28-11, which had Prue sand at 951-92 ft. and in which an 80-qt. shot brought up at 350-bbl. production in 48 hours, later pumped 102 bbl. a day.

Jackson County

In the Tipton field, in Jackson County, Harper No. 1 Rogers, SW SW SE Section 32-1n-19w, set 7-in. casing at 2,501 ft., total depth 2,545 ft. The well made an initial production of 115 bbl. In the Altus field, Burnham No. 1 Gaines, SW SW NW Section 10-1n-20w, is a 10-bbl. well at 2,209 ft. It also produces 29 bbl. of water. Vaughn No. 1-A Stokes, NW SW SW Section 11-1n-20w, started at 10 bbl. a day from granite wash at 1,417-20 ft. Vaughn No. 3-A Stokes, SW SW SE Section 11-1n-20w, swabbed 45 bbl. per day from granite wash at 1,348-58 ft. Later it pumped 13 bbl. in 24 hours.

Grady County

In Chickasha County, Carter Oil Co. completed a 13,000,000-cu. ft. gas well in No. 1 Smith, C SE SW Section 26-5n-8w, rock pressure was 1,880 lb., total depth of the hole is 6,620 ft., but the gas is coming from a number of horizons from 5,338 to 6,340 ft. Nichols No. 3 Royce, NW SW NE Section 12-5n-9w, was a 15,000,000-cu. ft. gasser from pays at 2,980-91 ft. and 3,180-3,250 ft. Rock pressure is 1,700 lb.

Caddo County

In the Apache district of Caddo County, Texas Co. No. 1 Smith, C NE NW Section 2-5n-1w, had Viola lime at 2,543-56 ft., total depth. Gas was leaking outside the surface pipe and derrick was being moved out and the test will be abandoned temporarily.

Logan County

Blackwell Oil & Gas Co. No. 1 Quigley, SE SE NW Section 28-18n-4w, Lovell area, old total depth 3,789 ft., plugged back to 3,320 ft. and perforated casing at 3,000-15 ft. and recovered 9,250,000 cu. ft. of gas the first 24 hours.

Kiowa County

Moore No. 1 Blubagh, NE NE SE Section 2-6n-17w, was dry and abandoned at 605 ft. Washita Oil & Gas Co. No. 2 Harns, C NW NE, was temporarily abandoned at 6,000 ft.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Section 28-10n-20w, drilling at 12,668 ft.

New Work Started

New work started during the week in eight counties included the following wells and locations:

Pottawatomie County

Yorkham Production Co. No. 1 Carlock, SE SE NE Section 6-10-4, cementing 12-in. at 98 ft.

Mid-Continent Petroleum Corp. No. 5 Viux, NE NW SE Section 31-7-5, building rig.

J. E. Trigg No. 1-A Higdon, C E½ NW NE Section 5-6-5, building rig.

Mid-Continent Petroleum Corp. No. 5 Kah Dot, NW NE SE Section 36-7-4, location.

Pontotoc County

Lake Oil Co. No. 4 Summers, SW SW SW Section 25-5-4, building rig.

Superior Oil Corp. No. 2 Summers, NW NW NW Section 36-5-4, rigging up rotary.

Creek County

T. H. Stuart No. 1 Deer, NE SE NE Section 4-14-10, was a location.

C. A. Beal No. 1 Morton, SW SW NE Section 34-14-10, building rig.

Okmulee County

Price and others No. 6-A Warner, NW SE NE Section 21-14-14, spudding.

K. B. K. Production Co. No. 2 Harris, SW NE SE Section 19-13-12, machine.

Stanolind Oil & Gas Co. No. 1 McMahon, NE NE SE Section 12-9-7, a wildcat in Seminole County, building rig.

Indian Territory Illuminating Oil Co. No. 8 Button, NE SW SW Section 19-11-2w, Oklahoma City field, a location.

Southern Oklahoma

S. R. Ellis No. 1 Tucker, NE SW NW Section 22-1s-5w, Velma pool of Stephens County, rigging up machine.

Carter Oil Co. and others No. 18 Aim, SE SE NE Section 26-1s-5w, Stephens County, had a slight showing of oil in sand at 451-62 ft., total depth, and shut down.

Indian Territory Illuminating Oil Co. No. 5 Graham, NW SE NE Section 1-3s-19w, Tillman County, location.

Raizen Brothers No. 1-A Ingram, NE SE NW Section 16-4s-3w, drilling at 25 ft.

Sinclair Prairie Oil Co. No. 15 Holman, NE NE NW Section 16-4s-3w, Carter County, digging pits.

Burk Royalty Co. No. 1 Holt, SE SW NE Section 32-1-19w, Jackson County, drilling ahead.

West Texas Fields

(Continued from Page 78)

ft., 12,845,000 cu. ft. gas. Magnolia Petroleum Co. No. 29 fee No. 227, 2,830-92 ft., 178 bbl.

Hutchinson County

J. Gordon Burch No. 3 W. E. Herring, 3,065-3,171 ft., 553 bbl. Skelly Oil Co. No. 7 W. E. Herring, 3,090-3,125 ft., 481 bbl.

Moore County

Texoma Natural Gas Co. No. 1-S W. R. Foster, 3,014-3,352 ft., 11,300,000 cu. ft. gas.

La.-Ark. Fields

(Continued from Page 70)

129 bbl. per day through 12/64-in. choke, casing pressure 250 lb., total depth 7,690 ft., set 6-in. casing 7,667 ft., perforated 7,592-7,625 ft.

EAST BORDER TEXAS

Rodessa—Marion County

Arkansas Louisiana Gas Co. No. 1 Crawford, 25-acre tract in Coy Survey, 424 bbl. per day, ¼-in. choke, tubing pressure 400 lb., casing pressure 950 lb., total depth 6,163 ft. George Echols No. 1 C. W. Ray, 532 ft. from west line and 327 ft. from north line of a 16-acre tract, Hanks Survey, 312 bbl. per day, ¼-in. choke, tubing pressure 360 lb., casing pressure 1,050 lb., set 5½-in. casing 5,978 ft., total depth 6,002 ft.

Michigan Field Report

By
O. C. PRESSPRICH

Permanent Proration Order Issued by State Commission

SAGINAW, Mich., June 26.—State-ordered proration in Michigan's six principal oil fields has been made permanent, effective as of July 1, by order of the State Conservation Commission, which held a special meeting last week for that purpose at Mackinaw City. The regulations continue an emergency order issued under authority of the state's new oil control law a few weeks ago, but include an added provision of a 20-bbl. daily minimum.

The minimum was provided after the commission had heard protests at a public meeting that excessively restricted production would make some wells unprofitable. The ruling makes permanent a maximum allowable of 200 bbl. per day per well for each 10-acre drilling unit in the Bloomingdale and Columbia fields of Van Buren County, the New Salem field in Allegan and the Walker pool in Kent County. For the Freeman 10-acre unit field in Clare County, the allowable is set at 125 bbl. and for the Redding Township field, also in Clare, the allowable on a 20-acre unit basis is 250 bbl. a day.

While debate over the order, designed as a conservation measure, continued in oil circles here, the control regulation appears not to have had any effect toward decreasing development activity. During the past week, while 38 new drilling permits promise to extend the field of activity more widely than ever, were being approved by the Conservation Department, the completion record showed 18 new producing wells in the Salem, Walker, Bloomingdale and Columbia fields, which add approximately 7,000 bbl. of crude to the daily potential. In the same 12 oil tests and one gas test were abandoned as dry holes.

Explains Purpose

Discussing the permanent proration order, State Petroleum Engineer F. R. Frye declared the purpose is to conserve natural gas in order that pressure in producing wells will be continued for longer periods. In theory, he asserted, ultimate recovery for producers will be greater under a proration plan than if production were not regulated.

Fields which have stripper wells are not affected by the proration regulation, he added.

On wells in areas smaller than a full 10-acre drilling unit, production will be computed on ratio to the full unit. To guard against premature abandonment, however, the 20-bbl. minimum was established.

Producers, purchasers and transporters must report to the supervisor of wells by the fifteenth of each month the amount of oil they handled during the previous month.

The week was uneventful, so far as the new development was concerned, however, the best well brought in during the week being one rated as good for 1,500 bbl. a day in the Walker pool of Kent County. Another in Clare's Redding pool rated 1,320 bbl. and one of the new Columbia wells was gaged at 1,000 bbl. a day.

All five completions in the past week in Walker Township were producing wells, giving that field the best record, but there was a decided pickup in activity in Van Buren County, which had 13 completions, 7 being producers good for from 70 to 1,000 bbl. a day. Developments in Van Buren's Arlington Township suffered a setback when two tests were abandoned as dry holes and resulted in abandoning of location for a third after the hole had been sunk approximately 500 ft.

An effort to revive activity in Muskegon County, where the industry first assumed importance in Michigan, failed as a test in Montague Township was stopped at 1,755 ft. Similarly, developments in Midland and Isabella counties were checked when C. W. Teater, operating in Section 23 of Isabella's Nottawa Township, abandoned the No. 1 Tillman at 3,853 ft. and Sun Oil Co. halted operations on the No. 1 Arthur Schofield in Section 9 of Midland's Lincoln Township at approximately the same depth.

Efforts are being made to extend the field of productivity further to the south and among latest developments is a test only a few miles from the Indiana state line in St. Joseph County.

Wolverine Natural Gas Co. completed the biggest well of the week in Section 4 of Walker Township, Kent County, the test rating 1,500 bbl. before the well was acidized. The same concern got a 500-bbl. well in Section 5 while Smith Petroleum Co. completed two others, about half that good, in the same section.

While all five completions in Allegan County's Salem field were producers, the best was good for not more than 250 bbl. in Section 14, the smallest for only 25 bbl. in Section 11. Three completed in Section 2 ranged from 50 to 110 bbl.

New production developed in Bloomingdale after a lapse of a few weeks in that formerly most prolific of the Van Buren fields. Best of the four new wells was C. C. Goff No. 1 William Miller, rated at 485 bbl. naturally. There were two dry holes. Bridger Basin Oil Co. brought in a 1,000-bbl. well in Section 13 of adjoining Columbia Township, while Clapsaddle & Harris got a well for 350 bbl. in the same section and Weber Oil Co. missed the pay in Section 13, with its No. 3 Michigan Central Railroad. In Freeman Township of Clare County a gas test failed, but in the adjoining pool Gulf Refining Co. brought in a 1,320-bbl. oil well.

Extensive and widespread new development is indicated by the week's permit list which shows tests listed for 13 counties, Kent leading with 11, Van Buren with 9, and Allegan with 7. But, due to be watched with interest, will be wildcat developments proposed for Lake, Osceola and Barry counties, as well as in Montcalm, Ottawa, Berrien and Kalamazoo.

Following is the completion summary:

Allegan County

Overisel Township (4n-14w)—C. J. Farley abandoned as a dry hole at 1,650 ft. the No. 1 Harry Lampen, E½ NW SE Section 21.

Salem Township (4n-13w)—Five small producers were completed in the Salem field. Muskegon Oil Co. acidized No. 3 F. Sutter, NW NE SW Section 2, to get 50 bbl. daily at 1,702 ft. Socony-Vacuum Oil Co. is getting 100 bbl. after acidizing No. 1 B. Fein, SW SE SW Section 2, which was completed at a depth of 1,680 ft. Victor R. Wilson completed No. 2 F. W. Sutter, NW SE SW Section 2, at 1,659 ft., and after being acidized the well's daily output was 110 bbl. Smallest producer of the lot was the Gordon Oil Co. No. 1 Roy Slindlinger, SE SE NW Section 11, good for only 25 bbl. a day after acidization. Completion depth was 1,600 ft. Salem Gas & Oil Co. made the best showing when No. 1 Frank A. Smith, SW SW SW Section 14, did 250 bbl. after being acidized at completion depth of 1,585 ft.

Clare County

Freeman Township (18n-6w)—Taggart Brothers, Inc., abandoned a gas test, No. 4 White-Blaine Community, C SE Section 2, after going down 1,587 ft.

Redding Township (19n-6w)—Gulf Refining Co. production division completed No. 3 Alford-State, S½ NW SW Section 28, at 3,886 ft. Production, after the well was acidized, was rated good for 1,320 bbl. a day.

Isabella County

Nottawa Township (15n-5w)—C. W. Teater, attempting to revive activities in Isabella, gave up as a dry hole No. 1 Tillman, NE SE NW Section 23, after drilling the test to 3,853 ft.

Midland County

Lincoln Township (15n-1e)—Sun Oil Co. abandoned as a dry hole at 3,854 ft. No. 1 Arthur Schofield, C NW NW Section 9.

Muskegon County

Montague Township (12n-17w)—Robert C. Lentz, trustee, abandoned No. 1 Albert Ehike, NE NE NW Section 18, when the test continued dry down 1,755 ft.

Osceola County

Highland Township (20n-8w)—After drilling for 2,100 ft. on No. 1 Harry Ealy Estate, NE Section 30, Champion Development Co. abandoned the test.

Kent County

Walker Township (6n-12w)—The new Walker pool potential was boosted more than 2,600 bbl. daily as five commercial wells were completed. Three of the completions were in Section 5, they being the Smith Petroleum Co. No. 1 Berlin State Bank, NW SW NE, completed at 1,789 ft. and which produced 250 bbl. in 9 hours after being acidized; Smith Petroleum No. 2 Berlin State Bank, NW SE NE, doing 300 bbl. naturally at 1,765 ft., and Wolverine Natural Gas Co. No. 4 Rex Johnson, SW NW NE, completed at 1,782 ft. and rating 500 bbl. a day after being acidized. Clarence Welsh completed No. 1 Bouters & Donkers, NE SW NW Section 33, at 1,843 ft. Smallest well of the five, it was good for 75 bbl. a day after acidization. With its No. 5 Rex Johnson, SW NW NW Section 4, Wolverine Natural Gas got the best well of the week in Michigan. Completed at 1,775 ft. natural daily production was rated at 1,500 bbl.

Van Buren County

Arlington Township (2s-15w)—R. W. Bloss abandoned No. 1 Theresia Schemenauer, SE SE SE Section 5, at 1,130 ft. T. C. Hudson abandoned No. 1 Scott Estate, NE SW NE Section 10, at 1,102 ft. Michi-Cal Oil Co., after drilling No. 1 Frank Sealy, NE SW SW Section 5, approximately 500 ft., abandoned the location.

Bangor Township (2s-16w)—Dry at 1,025 ft. No. 1 Ray Sanders, NW NW NE Section 20, was abandoned at W. H. Bochenek.

Bloomingdale Township (1s-14w)—Grime & Sons abandoned as a dry hole at 1,340 ft. No. 3 Richard Fox, SW SE SW Section 7. Also dry and abandoned at 1,382 ft. was the H. Brown Cannon, trustee No. 1 Sage, SE SW SW Section 13. No. 1 Bertha Naier, NE SW NE Section 14, a development for C. C. Goff and others, was completed at 1,294 ft. and, after being acidized, was good for 100 bbls. daily. The Bloomingdale Development Co. No. 1 Babcock, NE NW NE Section 18, rated at 400 bbls. daily. The well was acidized at 1,201 ft. Devine & Stroud completed No. 1 E and G. Beals, W½ NE NE Section 18, at 1,235 ft. After acidizing, the well produced 70 bbl. a day. Best of the new Bloomingdale wells was the C. C. Goff No. 1 William E. Miller, NW SE NE Section 24. Natural production was gaged at 485 bbl. a day and completion depth was 1,354 ft.

Columbia Township (1s-15w)—Three out of four was the production record for the Columbia completions. Rex Oil & Gas Co. was getting 70 bbl. daily, after acidizing No. 1 Addison Smith, NE SW SE Section 2, completed at 1,186 ft. No. 3 Michigan Central Railroad, NE NE NE Section 13, was a dry hole, being abandoned at a depth of 1,218 ft. by Weber Oil Co. interests. Clapsaddle & Harris acidized No. 5 Locker, NE SE SW Section 13, to get 350 bbl. a day. The well's total depth is 1,221 ft. Topping the new Columbia wells was Bridger Basin Oil Co. No. 1 Thomas J. Preston, NE NW NE Section 13, completed at 1,199 ft. and rating 1,000 bbl. a day after being acidized.

Canadian Fields

Completions and Operations in Northwest and in Ontario

By VICTOR LAURISTON

CHATHAM, Ont., June 24.—Effective June 13, aggregate crude allowable for Turner Valley was boosted to 27,000 bbl. The previous figure was 25,000 bbl. bbls. a day. In the new schedule the largest producer is Home Oil Co. No. 2 Millarville, with 999 bbl., Vulcan-Brown Petroleums No. 1 ranking second with 917 bbl. Other major producers are: Frontier Royalties No. 1, 846 bbl.; Royalite Oil Co. No. 36, 811 bbl.; Royalite No. 38, 808 bbl.; Sundance Royalties No. 1, 782 bbl.; Commoil No. 1, 769 bbl.; Royal Canadian No. 2, 766 bbl., and Sunset Oils No. 1, 720 bbl. Temporary allowables of 225 bbl. each, pending test, are given to East Crest Oil Co. No. 4, LSD 8, Section 6-19-2w5; Okalta Oil Co. No. 8, LSD 6, Section 16-18-2w5; and York Oils No. 2, LSD 6, Section 20-18-2w5. Of the new aggregate, Royalite wells are producing approximately 20 per cent; Anglo-Canadian Oil Co. and associated wells 16.26 per cent; and Brown Oil Corp. and its affiliates 14.72 per cent; with independent producers handling 49.02 per cent.

Conservation board officials are completing another survey of bottom-hole pressures throughout the entire crude area, which will be a guide in fixing future allowables.

Turner Valley Producers

In Section 6-19-2w5, West Central Turner Valley, East Crest Oil Co. No. 4, LSD 8, finished in the Madison limestone at 8,040 ft., produced 296 bbl. a day through casing. Temporary allowable has been set at 225 bbl. Okalta Oil Co. No. 8, LSD 6, Section 16-18-2w5, finished at 7,102 ft., flowed 356 bbl. without acidizing, and has temporary allowable of 225 bbl. West of the main field, Okalta Oil Co. No. 6, LSD 3, Section 30-18-2w5, plugged back to 9,994 ft., producing from the upper lime, still shows some water with the crude, believed due to defective shutoff in the lower lime. York Oils No. 2, LSD 6, Section 20-18-2w5, finished in the lime at 8,026 ft., is testing, with temporary allowable of 225 bbl.

In Section 32-18-2w5, Oil Ventures No. 1, LSD 14, has been finished in the lime around 7,800 ft. and is flowing freely without booster gas. It looks like a large producer.

Tests in the Lime

In Section 32-18-2w5, British Colonial Oils No. 1, LSD 5, is below 8,205 ft. after getting the Madison at 7,911 ft. and cementing casing 24 ft. in. The upper lime showed exceptional porosity.

George Harris and associates No. 2, LSD 15, immediately east of Oil Ventures No. 1 producer, is below 7,507 ft., 407 ft. in the lime, and will probably be the next completion.

In Section 31-18-2w5, Anglo-Canadian Oil Co. No. 5, LSD 8, is below 8,309 ft. after getting the Madison at 8,177 ft.

In Section 17-18-2w5, Anglo-Canadian Oil Co. No. 4, LSD 6, got the Madison at 7,855 ft. and is resuming after cementing casing at 7,870 ft.

West Side Drilling

Command Oils No. 2, LSD 11, is waiting for improved roads to move derrick equipment. J. W. Welch will superintend drilling. Royalite No. 39, LSD 3, is in the upper Benton formation below 6,781 ft.

In Section 17-18-2w5, Extension Royalties No. 2, LSD 11, is in the Blairmore formation below 6,519 ft. Anglo-Canadian Oil Co. No. 6, LSD 3, is in the same formation below 6,584 ft. Royalite No. 41, LSD 1, is below 5,337 ft.

Brown Oil Corp. has secured an option on acreage in LSD 10 and 15, Section 5-18-2w5, and LSD 4, Section 9-18-2w5, together with a right to one-third participation in any well drilled on LSD 1, 3, 4, 5, 8, 9, and 16, Section 5-18-2w5, in return for a stock consideration.

West of the main field, Scottish Petroleums No. 1, LSD 16, Section 19-18-2w5, is below 8,337 ft. after getting the Dalhousie sand at 8,180 ft. Anglo-Canadian No. 7, LSD 9, Section 31-18-2w5, has derrick up.

North Turner Valley

Weather conditions have delay movement of equipment to Home Oil Co. No. 3, LSD 1, Section 33-20-3w5. As soon as this test is under way rotary will be moved from Home No. 2 producer to No. 4, LSD 9, Section 28-20-3w5. Both tests will likely be drilling early in July.

In the Waite Valley area, as soon as Harris No. 2 is finished, rotary outfit will be moved to National No. 3 location.

Tests in the Foothills

Heavy rains and bad roads have isolated many of the drilling camps in the foothills and have interfered with operations.

On the Highwood-Sinclair structure, Green Valley Oils No. 1 Banner, LSD 6, Section 34-17-3w5, is shut down at 6,946 ft. after drilling 1,586 ft. in the Madison limestone. Only some small shows of gas and light crude have been met.

On the Watson structure, Mar Jon Oil Co. No. 5, LSD 3, Section 4-10-2w5, abandoned at 6,150 ft., is dismantling rotary outfit for removal to North Turner Valley where No. 5 will be drilled.

The California Co. has secured a prospecting permit on a large block of acreage in the Clearwater-Ram River area, about 120 miles northwest of Calgary. The area is being investigated by two geologists.

Del Bonita Operations

On the Del Bonita structure in the border area south of Lethbridge, Terminal Oil Co. No. 1, NE¼ Section 18-1-21w4, finished in the top of the lime, is flowing around 50 bbl. a day of 37-gravity crude, after perforating and acidizing the formation. Outfit is being moved to the old Nordon-Ronay well, LSD 12, Section 2-2-20w4, on the Twin River structure, which got oil shows near the top of the limestone from 3,925 to 3,940 ft. This well will be given similar treatment and placed in regular production. Later, work will be resumed on Terminal No. 2, NW¼ Section 7-1-21w4, standing for over a year at 175 ft. Production from Terminal No. 1 is being run into tankage and will be used for drilling fuel.

Ontario Operations

In the Petrolia-Enniskillen field, in Lambton County, Ontario, W. J. Hussey's test on the Peninsular Sugar Co. property, Blind Line, Petrolia, bottoming at 460 ft., was shot with 200 lb. of dynamite, increasing a natural flow of 2 bbl. a day to 3 bbl. A second 200-lb. shot packed down with sand to concentrate the force in the producing horizon, and touched off with electric fuse, temporarily blocked the hole, and some difficulty was experienced in cleaning it out. Indications are for a further increase in production. The well will be acidized. Operations are of an experimental nature, to test various methods of increasing shallow production.

California Oil Field Operations For April, 1939

According to figures collected by the American Petroleum Institute, the total production of crude oil in California for April amounted to 18,403,853 bbl., an average of 613,462 bbl. per day. This is a decrease of 8,596 bbl. per day under March production.

Total stocks of crude and all products in Pacific Coast territory increased during the month 503,726 bbl. The total stocks at the end of the month were 162,096,694 bbl. The total stock increase for 1939, up to April 30, was 4,412,405 bbl.

Seventy-eight wells were completed during the month with an initial daily production of 71,963 bbl., compared with 58 wells completed during March, with an initial production of 53,034 bbl.

CRUDE PETROLEUM PRODUCTION

(Figures of production and stocks are in barrels of 42 gal.)

	Total production April	Daily average Apr. 1939	Mar. 1939	Apr. 1938
Group 1:				
Arvin	13,694	456	163	.....
Belridge—North	346,630	11,554	11,968	15,843
Belridge—South	33,360	1,112	1,207	1,174
Canal	127,843	4,261	4,466	1,856
Canfield Ranch	1,053	35	46	138
Coalinga	334,254	11,142	10,595	13,129
Cole's Levee	8,767	292	225	.....
Edison	69,180	2,306	2,260	3,537
Elk Hills	296,762	9,892	10,123	11,120
Fruitvale	203,271	6,776	7,053	9,260
Greeley	48,621	1,621	1,791	3,304
Kern River	334,456	11,149	11,253	13,348
Kettleman Middle Dome	1,008	34	37	60
Kettleman North Dome	1,591,704	53,057	56,100	80,957
Lost Hills	99,160	3,305	3,420	3,830
McKittrick	88,194	2,940	3,899	3,803
Midway-Sunset	1,588,667	52,956	55,435	65,935
Mountain View	252,834	8,428	8,608	12,211
Mount Poso	393,680	13,123	13,273	19,420
Rio Bravo	251,963	8,398	8,145	3,123
Round Mountain	327,911	10,930	11,614	16,731
Ten Section	259,560	8,652	9,109	6,155
Tupman	15,584	519	264	.....
Wasco	21,563	719	903	389
Wheeler Ridge	9,626	321	372	314
Group 2:				
Capitan	74,506	2,484	2,666	3,068
Elwood	127,695	4,257	4,634	6,611
Rincon	87,458	2,915	2,923	3,827
San Miguelito	72,374	2,413	2,324	2,965
Santa Barbara	8,387	280	289	442
Santa Maria	557,337	18,577	17,202	17,805
Summerland	931	31	22	29
Ventura Avenue	995,831	33,194	33,685	37,114
Ventura-Newhall	178,201	5,940	5,829	5,170
Watsonville	900	30	30	40
Group 3:				
Brea-Olinda	166,959	5,565	5,636	5,927
Coyote—East	67,217	2,241	2,527	3,560
Coyote—West	231,352	7,712	7,970	8,998
Dominguez	634,435	21,148	21,256	26,737
El Segundo	99,067	3,302	3,451	14,418
Huntington Beach	875,013	29,167	28,678	34,193
Inglewood	350,898	11,697	12,647	15,924
Lawndale	2,016	67	72	71
Long Beach	1,456,771	48,559	48,511	58,185
Los Angeles-Salt Lake	14,804	493	503	553
Montebello	464,868	15,496	15,021	8,551
Playa Del Rey	156,030	5,201	5,301	6,763
Potrero	28,623	954	879	416
Richfield	256,567	8,552	8,512	9,674
Rosecrans	406,007	13,533	15,243	6,905
Santa Fe Springs	833,717	27,791	28,317	37,298
Seal Beach	220,677	7,356	7,612	9,476
Torrance	651,628	21,721	21,892	9,607
Whittier	29,109	970	985	945
Wilmington	2,635,130	87,838	85,114	100,672
Total April	18,403,853	613,462	622,058	721,581
Total March	19,283,785	622,058	.....	.....
Decrease	879,932	8,596	.....	.....

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WILDCAT OPERATIONS

CALIFORNIA

IMPORTANT WELLS AND NORTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
Union Oil, No. 5 Vicente, Santa Maria Valley, S. Barb.	21-10-34	5,279	flow. 1,480 b.d.
Hogan Pet., No. 1-A Zabala, Casmalia, Santa Barbara	33- 9-34	1,277	sd. sh. drlg.
Arnold, E. C., No. 2 Careaga, Los Alamos, S. Barbara	8- 8-33	6,838	cmtd. fish.
Field, O. C., No. 1 White, Cat Canyon, Santa Barbara	21- 9-33	6,212	hd. sh. drlg.
United West. Oil, No. 1 Los Olivos, Santa Barbara	16- 7-30	3,883	idle
General Pet., No. 4 More, Goleta, Santa Barbara	15- 4-28	4,757	redrlg. 2,775
Trans-Oceanic Oil Co., No. 3 Mdivani, Mesa, S. Barb.	28- 4-27	1,598	sd. sh. drlg.
Topeka Oil, No. 17 State, Summeriand, Santa Barbara	22- 4-26	1,821	idle
St. Louis Oil, No. 1 Williamson, Sespe, Ventura	1- 4-20	1,994	will deepen
Section 20 Oil Co., No. 21, Sespe, Ventura	20- 5-19	2,941	sd. sh. drlg.
English, J. A., No. 1 Lankershim, Hopper Can., Ven.	13- 4-19	2,502	O.S. drlg.
Levesque, G. M., No. 1 Robertson, Simi, Ventura	17- 2-18	2,030	idle
Texas Co., No. 137 Shiells, Shiells Canyon, Ventura	4- 3-19	3,272	redrlg. 1,262
El Rancho Oil, No. 3 Elkins, Shiells Canyon, Ventura	9- 3-19	3,731	rd. sh. drlg.
Continental Oil, No. 11 Grubb, San Miguelito, Ventura	24- 3-24	6,171	O.S. drlg.
C. C. M. Oil, No. 7-A Hobson, Padre Canyon, Ventura	15- 3-24	6,000	P.B. 5,870
C. C. M. Oil, No. 27-B Hobson, Rincon, Ventura	16- 3-24	4,917	swabbing
Rincon Dev., No. 82-4 Shudde, Rincon, Ventura	Tideland	2,078	fish D.P.
Tide Water A. O., No. 34 V.L.W., Ventura Ave., Ven.	24- 3-23	7,700	O.S. drlg.
Tide Water A. O., No. 40 V.L.W., Ventura Ave., Ven.	25- 3-23	10,769	O.S. drlg.
Tide Water A. O., No. 14 McGonigle, Ventura	23- 3-23	9,670	hd. sh. drlg.
Tide Water A. O., No. 84 Lloyd, Ventura Ave., Ven.	27- 3-23	6,596	sd. sh. drlg.
Tide Water A. O., No. 123 Lloyd, Ventura Ave., Ven.	23- 3-23	8,635	P.B. 8,430
Tide Water A. O., No. 124 Lloyd, Ventura, Ventura	23- 3-23	9,160	hd. sh. drlg.
Tide Water A. O., No. 8 Hartman, Ventura Ave., Ven.	22- 3-23	8,650	swabbing
Shell Oil, No. 99 Taylor, Ventura Ave., Ventura	29- 3-23	7,350	O.S. drlg.
Shell Oil, No. 100 Taylor, Ventura Ave., Ventura	29- 3-23	2,678	sd. sh. drlg.
Shell Oil Co., No. 23 Gosnell, Ventura Ave., Ventura	28- 3-23	6,315	idle
Shell Oil, No. 34 Edison, Ventura Ave., Ventura	28- 3-23	2,184	sd. sh. drlg.
Emigrant Oil, No. 1 Den, Devil's Den, Kern	24-25-18	4,278	fish D.P.
Belridge Oil, No. 35-38, North Belridge, Kern	35-27-20	7,693	sd. sh. drlg.
Belridge Oil, No. 28-17, North Belridge, Kern	28-27-20	4,994	sd. sh. drlg.
Belridge Oil, No. 26-25, North Belridge, Kern	26-27-20	8,500	redrlg. 7,898
Tide Water A. O., No. 21, North Belridge, Kern	21-27-20	6,874	sd. sh. drlg.
Richfield Oil, No. 3 Belridge, North Belridge, Kern	22-27-20	8,040	br. sh. drlg.
Tide Water A. O., No. 10-B Williamson, Lost Hills	11-26-20	1,610	P.B. 1,395
Standard Oil, No. 2-1 Tulare Farms, Delano, Kern	35-24-23	2,445	19,000 M.c.f.
Crusaders Oil, No. 1 Quinn, Richgrove, Kern	9-25-27	194	sd. sh. drlg.
Dilamar Oil, No. 3 Quinn, Jasmin, Kern	15-25-27	2,902	cmtd. 2,829
Sieman, Fred, No. 2 Extension, Edison, Kern	6-30-29	4,170	O.S. drlg.
Grizzly Bear Oil, No. 3 Kelley, Round Mountain, Kern	6-28-29	1,550	sd. sh. drlg.
Crestmont Oil, No. 6 Staley, Round Mountain, Kern	8-28-29	1,509	redrlg. 1,367
Brown & Cameron, No. 1 Brown, Kern River, Kern	27-28-28	450	O.S. drlg.
Berry, F. J., No. 1 Kern, Kern River, Kern	27-28-28	465	idle
D. B. K. Co., No. 5 Kern, Kern River, Kern	34-28-28	386	P.B. 345
Grogg & Fisher, No. 1 Kern, Kern River, Kern	27-28-28	284	sd. sh. drlg.
Wright & Eyer, No. 1 Dome, Mount Poso, Kern	28-26-28	1,514	pump water
Trico O. & G., No. 2 Villard, Mount Poso, Kern	17-26-28	498	sd. sh. drlg.
Texas, No. 2 Jewett, Arvin, Kern	16-31-29	3,377	sd. sh. drlg.
Standard Oil, No. 2 Jewett, Arvin, Kern	16-31-29	6,300	P.B. 6,117
Standard Oil, No. 3 Jewett, Arvin, Kern	16-31-29	163	sd. sh. drlg.
Universal Consd., No. 2 Derby, Arvin, Kern	15-31-29	4,834	sd. sh. drlg.
Western Gulf Oil, No. 42-B, K.C.L., Fruitvale, Kern	14-29-27	2,945	tested wet
Meridian Pet., No. 1 Deep Test, Fruitvale, Kern	23-29-27	2,598	sd. sh. drlg.
Pacific Southwest Oil, No. 1 Dillon, Fruitvale, Kern	27-29-27	4,068	flow 80 b.d.
Getty, George F., Inc., No. 1 Jannsen, Wasco, Kern	7-27-24	6,005	sd. sh. drlg.
Cal. Expl., No. 1 Dougherty-Salisbury, B'nw'w, Kern	7-29-24	12,989	P.B. 12,740
General Pet., No. 2 Van Ness, Rio Bravo, Kern	2-29-25	11,491	sd. sh. drlg.
Union Oil, No. 10-34, K.C.L., Rio Bravo, Kern	34-28-25	3,986	sd. sh. drlg.
Superior Oil, No. 1 Fink, Rio Bravo, Kern	27-28-25	9,250	sd. sh. drlg.
Standard Oil, No. 1 Ross, Greeley, Kern	20-29-26	8,109	deepening
Standard Oil, No. 11-18, K.C.L., Greeley, Kern	18-29-26	9,586	hd. sh. drlg.
Standard Oil, No. 11-19, K.C.L., Greeley, Kern	18-29-26	7,842	gr. sd. drlg.
Standard Oil, No. 12-6, K.C.L., Greeley, Kern	30-29-26	11,841	fish core bbl.
Continental Oil, No. 2-D, K.C.L., Bellevue, Kern	14-30-26	9,681	sd. sh. drlg.
Shell Oil, No. 78-24-A, K.C.L., Ten Section, Kern	24-30-25	8,266	swabbing
Shell Oil, No. 23-28-B, K.C.L., Canal, Kern	28-30-26	194	sd. sh. drlg.
Shell Oil, No. 25-14-A, K.C.L., Canal, Kern	14-30-25	7,798	sd. sh. drlg.
Tide Water A. O., No. 35-E, K.C.L., Strand, Kern	7-30-25	8,364	flow 1,305 b.d.
Ohio Oil, No. 13-E, K.C.L., Canal, Kern	13-30-25	3,255	sd. sh. drlg.
Richfield Oil, No. 12-33-A, K.C.L., Tupman, Kern	33-30-25	7,894	sd. sh. drlg.
Standard Oil, No. 21-1, K.C.L., Tupman, Kern	19-30-25	9,190	hd. sh. drlg.
Richfield Oil, No. 14-3-B, K.C.L., Coles Levee, Kern	3-31-25	8,843	sd. sh. drlg.
Tide Water A. O., No. 61, K.C.L., Coles Levee, Kern	14-31-25	10,010	flow 685 b.d.
Standard Oil, No. 20-1, K.C.L., Coles Levee, Kern	9-31-25	9,216	redrlg. 9,096
Ohio Oil, No. 3-F, K.C.L., Coles Levee, Kern	11-31-25	6,990	sd. sh. drlg.
Union Oil, No. 2-11, Coles Levee, Kern	11-31-25	4,895	sd. sh. drlg.
Richfield Oil, No. 1-D-B Crampton, Elk Hills, Kern	1-31-25	3,023	pump 65 b.d.
Standard Oil, No. 216 Tupman, Elk Hills, Kern	36-30-24	2,975	cmtd 2,871
Standard Oil, No. 218-15-D fee, Midway-Sunset, Kern	15-32-24	3,530	P.B. 3,502
Standard Oil, No. 21-C fee, Midway-Sunset, Kern	1-32-23	2,892	idle
Vista Grande Oil, No. 1 Schultz, Midway-Sunset, Kern	36-32-23	3,630	pump water
Van Fleet & Durkee, No. 3 Hoyst, Midway-Sun., Kern	36-32-23	2,510	P.B. 2,226
General Pet., No. 1 B.V.A., Midway-Sunset, Kern	1-32-24	4,934	sd. sh. drlg.
National Oil, No. 33 Sunset, Midway-Sunset, Kern	35-32-23	680	sd. sh. drlg.
Par Oil & Gas, No. 1 Hager, Midway-Sunset, Kern	16-31-22	2,606	sd. sh. drlg.
West. Gulf Oil, No. 1 Panhandle, Buena Vista L., Kern	3-32-26	8,751	sd. sh. drlg.
Gates, F. E., No. 2 Laymance, McKittrick, Kern	20-30-22	1,474	pump water
Richfield Oil, No. 1 K.C.L., Wheeler Ridge, Kern	28-11-20	11,004	cmtd. 10,815
Continental Oil, No. 1-F, K.C.L., San Emidio, Kern	5-10-21	5,150	sd. sh. drlg.
Bannow, L. E., No. 1 Irwin, San Emidio, Kern	15-10-23	1,699	sd. sh. drlg.
Petrol Corp., No. 33-5 Reserve, Tejon, Kern	33-11-19	8,946	redrlg. 6,994
Central Valley Oil, No. 1 Com'nity, El Prado, Fresno	1-12-20	1,218	dry; abd.
Shell Oil, No. 48-30 Port Costa, Turk, Fresno	30-17-16	9,166	redrlg. 8,910
Superior Oil, No. 1 S.P.L., Turk, Fresno	15-18-16	5,570	sd. sh. drlg.
Texas Co., No. 1 Loescher, Burrell, Fresno	12-17-16	6,550	sd. sh. drlg.
Gatos Creek Oil, No. 1 Cable, Gatos Creek, Fresno	19-19-13	98	sd. sh. drlg.
Stuart Oil, No. 1 Hill, West Coalinga, Fresno	12-21-14	1,410	pump 20 b.d.
Diamond, H. P., No. 7 Hill, West Coalinga, Fresno	35-20-14	170	sd. sh. drlg.
Nagayami & Haranaga, No. 2 Hill, W. Coal., Fresno	14-20-14	805	sd. sh. drlg.
Rylatt, Harry, No. 3 Kipling, West Coalinga, Fresno	26-20-14	1,928	hd. sh. drlg.
Bandini Pet., No. 48-18 Webb, NE. Coalinga, Fresno	18-19-16	6,951	sd. sh. drlg.
Amerada Pet., No. 26-17 S.P.L., NE. Coalinga, Fresno	17-19-16	7,598	sd. sh. drlg.
Lytle, R. S., agent, No. 48-7-F, SE. Coalinga, Fresno	7-20-16	6,683	sd. sh. drlg.
Lytle, R. S., agent, No. 75-7-F, SE. Coalinga, Fresno	7-20-16	7,654	hd. sh. drlg.
Lytle, R. S., agent, No. 5-18-F, SE. Coalinga, Fresno	18-20-16	7,003	sd. sh. drlg.
Texas Co., No. 1 Exeter fee, SE. Coalinga, Fresno	6-20-16	7,870	O.S. drlg.
Texas Co., No. 2 Exeter fee, SE. Coalinga, Fresno	6-20-16	6,565	sd. sh. drlg.
Standard Oil, No. 84-13-C fee, SE. Coalinga, Fresno	13-20-15	6,374	sd. sh. drlg.
Superior Oil, No. 2 Hight, SE. Coalinga, Fresno	8-20-16	4,586	sd. sh. drlg.
Superior Oil, No. 1 P.V.F., SE. Coalinga, Fresno	22-20-15	8,131	sd. sh. drlg.
Holly Dev. Co., No. 82-12-C, SE. Coalinga, Fresna	12-20-15	5,971	sd. sh. drlg.
K. N. D. A., No. 4-18-Q, Kettleman North, Kings	18-22-18	8,295	cmtd. 8,293
K. N. D. A., No. 2-20-Q, Kettleman North, Kings	20-22-18	7,460	sd. sh. drlg.
K. N. D. A., No. 4-22-Q, Kettleman North, Kings	22-22-18	5,850	br. sh. drlg.
K. N. D. A., No. 58-22-Q, Kettleman North, Kings	22-22-18	7,605	C.P. 7,232
K. N. D. A., No. 4-26-Q, Kettleman North, Kings	26-22-18	7,291	sd. sh. drlg.
Standard Oil, No. 2-19-J, Kettleman North, Fresno	19-21-17	6,504	will deepen
Standard Oil, No. 87-7-Q, Kettleman North, Kings	7-22-18	7,264	sd. sh. drlg.
Standard Oil, No. 52-17-Q, Kettleman North, Kings	17-22-18	7,779	cleaning out
Standard Oil, No. 63-17-Q, Kettleman North, Kings	17-22-18	2,184	sd. sh. drlg.
Standard Oil, No. 85-17-Q, Kettleman North, Kings	17-22-18	6,750	br. sh. drlg.
Standard Oil, No. 87-17-Q, Kettleman North, Kings	17-22-18	6,250	sd. sh. drlg.
Standard Oil, No. 41-21-Q, Kettleman North, Kings	21-22-18	8,190	flow 2,587 b.d.
Standard Oil, No. 63-21-Q, Kettleman North, Kings	21-22-18	5,131	sd. sh. drlg.
Standard Oil, No. 72-21-Q, Kettleman North, Kings	21-22-18	7,990	sd. sh. drlg.
Standard Oil, No. 83-21-Q, Kettleman North, Kings	21-22-18	7,785	cmtd. 7,705
Epco, Inc., No. 1 Cuyama, Creston, San Luis Obispo	27-27-13	5,680	sd. sh. drlg.
Newton, S. M., No. 1 Stafford, Panorama, S. L. Obispo	18-21-21	3,058	sd. sh. drlg.
Calif. Expl., No. 1 Irons, Cuyama Val., S. L. Obispo	19-10-24	2,260	resume work
Standard Oil, No. 1 Caipac, Rio Vista, Solano	15- 5-2	4,910	br. sd. drlg.
Buttes Oilfields, Inc., No. 5 Butte, Sut. Buttes, Sutter	1-15-1	4,397	sd. sh. drlg.

IMPORTANT WELLS AND SOUTHERN CALIFORNIA WILDCATS

Company, well, location, and county—	S.T.R.	Depth	Status
D. & J. Oil, No. 1 Lomita, Torrance, Los Angeles	23- 4-14	5,125	pump 70 b.d.

KEY TO ABBREVIATIONS USED IN DRILLING REPORTS

Abd., abandoned.
Acd., acidized.
B.O., barrels of oil.
B.P.D., barrels per day.
B.D., barrels daily.
B.P., back pressure.
B.R., building rig.
B. ck., bottom choke.
Br. sh., brown shale.
B.S., basic sediment.
C.&P., cellar and pits.
Cd. or Crd. cored.
C.D., correct depth.
Cg., coring.
Cmtd., cemented.
C.O., cleaning out.
Comp., completed.
Compr., compressor.
C.P., casing pressure, also cement through perforations.
Csg., casing.
D.D., drilling (or drilled) deeper.
Drlg. or Drg., drilling.
Drk. or Dk., derrick.
D.S., drill stem.
D.S.T., drill stem test.
D.&A., dry and abandoned.
Fsg., fishing.
Gbo., gumbo.
G.I., gas injection.
Gr., gravity.
Gr. sd., gray sand.
Grn. sh., green shale.
Hd. sd., hard sand.
H.F.W., hole full of water.
I.P., initial production.
L., lime.
L.D.D., later drilled deeper.
Lnr., liner.
Loc., location.
M.I.M., moving in material.
M.I.R., moving in rig.
M.I.R.T., moving in rotary tools.
M.O.T., milling on tools.
O.I.H., oil in hole.
O.S., oil sand.
O.T.D., old total depth.
O.W.D.D., owell drilling deeper.
O.W.P.B., old well plugging back.
P.B., plugging back.
P.B.P., pulling or pulled big pipe.
P.L., pipe line.
P.L.O., pipe line oil.
Pmpg., pumping.
P.O.P., putting on pump.
P.P., pulled pipe.
Rd. sd., red sand.
Rd. sh., red shale.
Recmt., recemented.
Recvd., recovered.
Rmg., reaming.
Redrlg., redrilling.
Rng., running.
R.O.G., rig on ground.
R.P., rock pressure.
R.U., rigging up.
R.U.R., rigging up rotary.
R.U.S.T., rigging up standard tools.
R.&T., rods and tubing.
S. or Sd., sand.
S.D., shut down.
Sdy. sh., sandy shale.
Sdtrk. or St., sidetracking.
S.D.P.L., shut down for pipe line.
S.D.O., or S.D.W.O., shut down awaiting orders.
S.G., show gas.
Sh.&L., shale and lime.
S.I., shut in.
S.I.P., shut in, prorated.
S.L.M., steel line measurement.
S.O., show oil.
S.O.G.&W., show of oil, gas and water.
Spdg. or Spd., spudding.
S.R., straightreaming.
Stdg., standardizing (also standing)
S.W., salt water.
Swbg., swabbing.
T.A., temporarily abandoned.
Tbg., tubing.
T.D., total depth.
T. ck., top choke.
T.P., tubing pressure.
Tr., tract.
Tstd., tested.
U.R., underreaming.
W.I.H., water in hole.
W.O., workover.
W.O.C., or W.O.C.S., waiting on cement to set.
W.O.O., waiting for orders.
W.P., working pressure.
W.S.O., water shutoff.
W.S.S.O.K., water shutoff O.K.
W.S.R. or W.O.S.R., awaiting standard rig.
Wtr., water.

D. & B. Oil, No. 5 Lomita, Torrance, Los Angeles ...	23-	4-14	2,687	sd. sh. drlg.
Elliott, D. W., No. 8 Kettler, Torrance, Los Angeles	23-	4-14	5,186	will redrl.
O'Donnell, J. E., No. 72 Lomita, Torrance, L. Angeles	30-	4-14	4,898	sd. sh. drlg.
Lebow-McNee Oil, No. 3-B Kettler, Torrance, L. Ang.	23-	4-14	4,787	sd. sh. drlg.
C. C. M. Oil, No. 12 Kettler, Torrance, Los Angeles..	23-	4-14	5,119	gr. sd. drlg.
Cinco Oil, No. 1 Lomita, Torrance, Los Angeles	23-	4-14	3,878	will deepen
General Pet., No. 7 Poggi, Harbor City, Los Angeles	23-	4-14	3,800	pump water
Texas Co., No. 6 Oakley, Harbor City, Los Angeles ..	30-	4-13	5,241	flow 210 b.d.
Union Oil, No. 69 Callender, Dominguez, Los Angeles	32-	3-13	3,181	sd. sh. drlg.
Shell Oil, No. 98 Reyes, Dominguez, Los Angeles ...	33-	3-13	7,850	flow 1,325 b.d.
Union Oil, No. 32 Rosecrans, Rosecrans, Los Angeles	19-	3-13	7,120	sd. sh. drlg.
Universal Consd., No. 17 Trust, Rosecrans, Los Ang.	18-	3-13	7,470	sd. sh. drlg.
Royalty Ser., No. 4 Gordon, Rosecrans, Los Angeles.	19-	3-13	7,900	O.S. drlg.
Bankline Oil, No. 1 Kirby, Rosecrans, Los Angeles ..	19-	3-13	7,723	rig to pump
King & Weymouth, No. 2 Averill, Rosecrans, L. Ang.	20-	3-13	1,868	sd. sh. drlg.
Averill, G. G., No. 1 Howard, Rosecrans, Los Angeles	20-	3-13	7,645	cleaning out
South. Cal. Pet., No. 1 Slabaugh, Rosecrans, Los Ang.	19-	3-13	2,171	sd. sh. drlg.
Wilshire Oil, No. 1 Leitch, Rosecrans, Los Angeles..	19-	3-13	7,870	flow 107 b.d.
Trans-Western Oil, No. 1 Beloil, Potero, Los Angeles	28-	2-14	5,450	redrlg. 1,298
Empire Oil, No. 1 Samarkand, Playa Del Rey, L. Ang.	34-	2-15	6,325	rig to pump
Tide Water A. O., No. 11 Potter, Aliso Canyon, L. A.	27-	3-16	3,288	hd. sd. drlg.
Union Oil, No. 1-27 Orcutt, Aliso Canyon, Los Ang	27-	3-16	5,980	idle
O'Donnell, J. E., No. 1 Hammond, Newhall, Los Ang.	8-	3-16	5,115	sd. sh. drlg.
Lang, E. M., No. 1 Rupy, Castaic, Los Angeles	7-	5-16	92	sd. sh. drlg.
Barnsdall Oil, No. 6 R.S.F., Newhall, Los Angeles ..	27-	4-17	3,474	sd. sh. drlg.
Barnsdall Oil, No. 7 R.S.F., Newhall, Los Angeles ..	27-	4-17	3,986	sd. sh. drlg.
General Pet., No. 5 Blinn, Wilmington, Los Angeles.	4-	5-13	3,150	sd. sh. drlg.
General Pet., No. 7 S.P., Wilmington, Los Angeles ..	2-	5-13	3,550	sd. sh. drlg.
Bond Pet., No. 3 Mutual, Wilmington, Los Angeles..	35-	4-13	3,245	flow 250 b.d.
Gremac Oil, No. 1 Harbor, Wilmington, Los Angeles	4-	5-13	3,678	sd. sh. drlg.
Long Beach Dev., No. 3-Y Harbor, Wilmington, L. A.	2-	5-13	3,895	flow 330 b.d.
Long Beach Dev., No. 4-Y Harbor, Wilmington, L. A.	2-	5-13	4,000	flow 395 b.d.
Long Beach Dev., No. 5-Y Harbor, Wilmington, L. A.	2-	5-13	3,989	tested wet
Long Beach Dev., No. 6-Y Harbor, Wilmington, L. A.	2-	5-13	3,975	sd. sh. drlg.
Macson Oil, No. 3-55-G Harbor, Wilmington, L. Ang.	32-	4-13	3,670	flow 370 b.d.
Oakes & Combs, No. 5-D Harbor, Wilmington, L. A.	3-	5-13	3,925	fish D.P.
Pet. Midway, No. 1-G Kupfer, Wilmington, Los Ang.	35-	4-13	3,468	swabbing
Richfield Oil, No. 29-P.D., Wilmington, Los Angeles	2-	5-13	2,891	flow 428 b.d.
Ring Oil, No. 3 Harbor, Wilmington, Los Angeles ..	35-	4-13	3,609	will deepen
Signal O. & G., No. 3-P.D., Wilmington, Los Angeles	3-	5-13	3,990	sd. sh. drlg.
Signal O. & G., No. 4-P.D., Wilmington, Los Angeles	3-	5-13	2,686	sd. sh. drlg.
Signal O. & G., No. 1-S.P., Wilmington, Los Angeles	2-	5-13	4,260	flow 945 b.d.
Signal O. & G., No. 2-S.P., Wilmington, Los Angeles	3-	5-13	2,181	sd. sh. drlg.
Sunray Oil, No. 842-2 Gilmore, Wilmington, Los Ang.	33-	4-13	5,775	redrlg. 5,398
Union Pacific R. R., No. 103, Wilmington, Los Ang.	3-	5-13	2,398	sd. sh. drlg.
Union Pacific R. R., No. 109, Wilmington, Los Ang.	3-	5-13	3,936	flow 890 b.d.
Union Pacific R. R., No. 110, Wilmington, Los Ang.	34-	4-13	3,732	P.B. 3,067
Union Pacific R. R., No. 16-E, Wilmington, Los Ang.	3-	5-13	3,995	P.B. 3,975
Wilton Oil, No. 8 Harbor, Wilmington, Los Angeles	3-	5-13	2,735	sd. sh. drlg.
Ridge Oil, No. 1 Club, Montebello, Los Angeles	3-	2-12	7,330	gr. sd. drlg.
Kern Oil, No. 25 Monterey, Montebello, Los Angeles	2-	2-12	6,798	sd. sh. drlg.
Kern Oil, No. 2 Eggleston, Montebello, Los Angeles.	2-	2-12	7,145	recmtd. 5,650
Kern Oil, No. 2 Taylor, Montebello, Los Angeles	2-	2-12	7,135	tested wet
Standard Oil, No. 4 Harvey, Montebello, Los Angeles	2-	2-12	6,998	P.B. 6,901
Standard Oil, No. 2 Braun, Montebello, Los Angeles	2-	2-12	7,653	testing
Standard Oil, No. 3 Braun, Montebello, Los Angeles	2-	2-12	7,625	O.S. drlg.
Standard Oil, No. 6 Braun, Montebello, Los Angeles	2-	2-12	2,284	sd. sh. drlg.
Standard Oil, No. 6 Whitehead, Montebello, Los Ang.	3-	2-12	7,655	O.S. drlg.
Standard Oil, No. 7 Whitehead, Montebello, Los Ang.	3-	2-12	3,373	sd. sh. drlg.
Standard Oil, No. 1 Kaufman, Montebello, Los Ang.	2-	2-12	6,465	will deepen
Union Oil, No. 4 Wilcox, Montebello, Los Angeles ..	2-	2-12	5,562	sd. sh. drlg.
Union Oil, No. 31 La Merced, Montebello, Los Ang.	1-	2-12	3,187	sd. sh. drlg.
Union Oil, No. 32 La Merced, Montebello, Los Ang.	2-	2-12	7,380	sd. sh. drlg.
Union Oil, No. 2 Howard & Smith, Montebello, L. A.	2-	2-12	7,602	O.S. drlg.
Union Oil, No. 5 Howard & Smith, Montebello, L. A.	2-	2-12	6,411	redrlg. 4,884
Union Oil, No. 2 Calkins, Montebello, Los Angeles..	2-	2-12	6,880	sd. sh. drlg.
Union Oil, No. 5 Paul Howard, Montebello, Los Ang.	2-	2-12	7,370	sd. sh. drlg.
Stanley Oil, No. 1 Montebello, Montebello, Los Ang.	2-	2-12	7,621	flow 2,150 b.d.
Bev. Mont. Oil, No. 1 Corbett, Montebello, Los Ang.	11-	2-12	6,650	O.S. drlg.
Bev. Mont. Oil, No. 2 Meyer, Montebello, Los Ang.	2-	2-12	3,467	sd. sh. drlg.
B-A Oil Prod., No. 1 Oswald, Montebello, Los Angeles	2-	2-12	3,288	sd. sh. drlg.
Hathaway Oil, No. 1 Dore, Montebello, Los Angeles.	11-	2-12	7,662	flow 1,400 b.d.
McVicar & Rood, No. 2 Manz, Montebello, Los Ang.	2-	2-12	7,160	O.S. drlg.
Pongratz Pet., No. 1 Newmark, Montebello, L. Ang.	3-	2-12	7,641	fish D.P.
Pongratz Pet., No. 1 Martin, Montebello, Los Angeles	2-	2-12	6,700	may deepen
McKeon, John, No. 1 Cowan, Montebello, Los Angeles	1-	2-12	4,382	sd. sh. drlg.
Vulcan Oil, No. 1 Nash, Montebello, Los Angeles ...	2-	2-12	7,648	flow 1,435 b.d.
Star Pet., No. 1 Banks, Montebello, Los Angeles	2-	2-12	5,376	sd. sh. drlg.
Caminol Co., No. 1-15 Cowan, Montebello, Los Angeles	2-	2-12	3,575	sd. sh. drlg.
Wood-Callahan Oil, No. 1 Bartlett, Montebello, L. A..	2-	2-12	3,550	sd. sh. drlg.
Bush Oil, No. 1 Alauzet, Montebello, Los Angeles ..	3-	2-12	5,050	sd. sh. drlg.
Herley-Kelley, Inc., No. 2 Masser, Montebello, L. A.	2-	2-12	7,625	sd. sh. drlg.
Texas Co., No. 18 Baldwin, East Montebello, L. Ang.	6-	2-11	7,682	sd. sh. drlg.
Colorado Oil, No. 19 Granger, Whittier, Los Ang. .	22-	2-11	4,690	sd. sh. drlg.
Taylor Prod., No. 1 Gregg, Citrus Grove, Los Angeles	17-	2-11	5,015	sd. sh. drlg.
Kelso, F. W., No. 1 Brea, Puente Hills, Los Angeles..	13-	2-10	1,880	sd. sh. drlg.
Parry & Associates, No. 1 Pool, Long Beach, L. Ang.	29-	4-12	7,820	sd. sh. drlg.
Texas Co., No. 15 Harlow Kent, Long Beach, L. Ang.	19-	4-12	1,535	sd. sh. drlg.
Sepulveda Oil, No. 1 Grady, San Pedro, Los Angeles	23-	5-14	614	resume work
Union Oil, No. 18 Y.L.G., Richfield, Los Angeles ...	34-	3-9	2,997	sd. sh. drlg.
Traders Oil, No. 1 Wagner, Richfield, Los Angeles.	22-	3-9	4,100	sd. sh. drlg.
Tide Water A. O., No. 54 Anaheim, E. Coyote, Orange	24-	3-10	3,634	redrlg. 3,390
Severns Drlg., No. 4 McNally, West Coyote, Orange.	24-	3-11	6,004	sd. sh. drlg.
Southwest Expl., No. 16 State, Hunt. Beach, Orange	10-	6-11	4,529	cleaning out
Southwest Expl., No. 17 State, Hunt. Beach, Orange	10-	6-11	2,198	sd. sh. drlg.
Southwest Expl., No. 19 State, Hunt. Beach, Orange	10-	6-11	5,140	O.S. drlg.
Duchess Oil, No. 4 Farnsworth, Hunt. Beach, Orange	34-	5-11	3,600	rigged up
Petremont Oil, No. 1 Norris, Hunt. Beach. Orange.	36-	5-11	354	sd. sh. drlg.
Carbon Can. Oil, No. 1 Schuch, Carbon Can., S. Bern.	36-	2-9	190	sd. sh. drlg.

OKLAHOMA

Week Ending June 24

NORTHERN OKLAHOMA

Atoka County

Giblett No. 1 Rich, SE SE SW Sec. 2-1-12. S.D. 728 ft.

Caddo County

Sinclair Prairie Oil Co. No. 1 German, SW NW NW Sec. 1-16-13w. Drlg. 1,375 ft.

Cleveland County

Hall & Briscoe No. 1 Mantooth, NW NW NW Sec. 24-6-1e. T.D. 3,505 ft.

Nels Burton No. 1 Boggs, NE NE SE Sec. 16-9-2w. 2nd Wlx. 7,585 ft.; T.D. 7,646 ft.; P.B. 7,473 ft.

Nels-Burrton No. 1 Hirsch, NW NW NE Sec. 17-9-2w. O.W.P.B.; O.T.D. 7,692 ft.; T.D. 7,695 ft.

Comanche County

Mid Night Oil No. 1 Howe, NW NW NE Sec. 30-2-13w. O.W.D.D.; O.T.D. 703 ft.; T.D. 894 ft.; fsg.

Ellis County

Enterprize Drlg. Co. No. 1 Wahl, SE NW NW Sec. 1-19-25w. Sd. 660-65 ft.; T.D. 730 ft.; S.D.O.

Garfield County

Kerlyn Oil Co. No. 1 Hein, NW NW NW Sec. 36-22-4w. T.D. 5,042 ft.; S. D.O.

Grady County

J. B. Nichlos No. 1 Bushnell, NW NE SE Sec. 7-5-8w. Drlg. 50 ft.

Grant County

Carter Oil No. 1 Staggers, C W½ SE NW Sec. 4-25-3w. Cg. 5,327 ft.

Smythe & O'Mara No. 1 State, C SE SW Sec. 16-25-4w. Drlg. 5,375 ft.

Harmon County

Russo Drlg. No. 1 Abernathey, C SW SW Sec. 12-2-26w (3,000-ft. test). Drlg. below 2,700 ft.

Hughes County

Carter Oil No. 1 Hamilton, C W½ NE SW Sec. 33-4-9. T.D. 4,235 ft., S.D.

Continental Oil No. 1 Hudson, SE SE SE Sec. 8-4-9. Drlg. 5,177 ft.

Harper County

Sinclair Prairie No. 1 George, SW SW SW Sec. 5-27-23w. T.D. 5,725 ft.; shot off pipe at 5,200 ft.; C.O.

Jackson County

English & Morgan No. 1 Lee, NW NW SE Sec. 36-2-19w. S.G. 1,360-63 ft.; T.D. 1,603 ft.; P.B. 1,243 ft.; S.D.O.

Jefferson County

H. M. Weir No. 1 Carmichael, NE NE SW Sec. 23-7s-7w. Drlg. 3,525 ft.

Kingfisher County

K. A. Ellison No. 1 Baker, NE NE SE Sec. 20-19-5w. T.D. 7,323 ft.; S.D.O.

Ace Gutowsky No. 1 Lankford, NE NE SE Sec. 34-17-6w. Miss. 7,014 ft.; Woodford 7,531 ft.; Msnr. 7,562 ft.; Wlx. 8,105 ft.; 2nd Wlx. 8,275 ft.; T.D. 8,330 ft.; S.D.O.

Kiowa County

C. M. Beckett No. 1 Standerfer, NE NE NE Sec. 25-7-18w. Drlg. 740 ft.

Bollen-Dillard & Roberts No. 1 Holcomb, NE NE SW Sec. 25-7-19w. R.U. mch.

C. J. Hagerling No. 1 Kimray, SW SW NW Sec. 36-5-18w. T.D. 997 ft.; rng. csg.

Russell S. Tarr No. 1 Kelsay, SW SW NW Sec. 20-7-17w. Pay 1,050-51½ ft.; F. 70 B.O.P.H. by hds.; est. 1,500 to 2,000 B.O.P.D; S.I.

Lincoln County

Black Gold No. 1 Connaley, NE NE NE Sec. 28-14-6. T.D. 3,133 ft.

Cooper Drlg. Co. No. 1 Blaney, SW SW NW Sec. 13-14-5. Cg. 3,290-3,305 ft.

Cooper Drlg. No. 1 Johnson, NE NE NW Sec. 32-15-5. Prue sd. 3,515-69 ft.; S.D.

Fain Drlg. Co. No. 1 Wertman, SW SW SW Sec. 12-15-4. T.D. 4,701 ft.; S.D.

Mason & Nicholls No. 1 Lindsay, SW SE SE Sec. 26-12-3. Wdfd. 5,175 ft.; drlg. 5,185 ft.

W. A. Villines No. 1 Marshall, NW NE NE Sec. 28-15-4. T.D. 5,080 ft.; S.D.

Pawnee County

Ed Kelly No. 1 Hill, SW SW SE Sec. 1-21-5. T.D. 2,845 ft.; whipstock 2,840 ft.; drlg. by tools.

Pittsburgh County

Phillips Pet. Co. No. 1 Hubacker, C NW NE Sec. 11-7-15. 1st Wlx. 7,514-24 ft.; drlg. 7,693 ft.

Pontotoc County

L. Walker No. 1 King, SW SE NW Sec. 5-4-7. T.D. 1,115 ft.; S.D.

Pottawatomie County

Alma Oil Co. No. 1 Johnson, SW NW SW Sec. 19-6-5. 2nd Wlx. 4,025 ft.; T. D. 4,062 ft.; P.B. 3,019 ft.; perf. 2,890-2,900 ft. in Earlsboro; F. 200 B.O.P.D.

H. L. Berky No. 1 Dowell, SW NE NW Sec. 33-8-4. Vio. 4,340 ft.; dolo. 4,445 ft.; drlg. 4,525 ft.

F. W. Cooper No. 1 Strawn, SE SE SW Sec. 32-8-5. T.D. 4,411 ft.; S.D.

I.T.I.O. No. 1 Lambert, C E½ NW NE Sec. 6-5-2. Vio. 5,280 ft.; Wlx. 5,675 ft.; cg. 5,686-97 ft.

Sequoyah County

Thompson Bros. No. 1 Ruby, NW NW NE Sec. 30-12-22. T.D. 1,510 ft.; S.D.

Seminole County

Culberson & Shepherd No. 1 Burton et al, SW NW SE Sec. 3-5-5. T.D. 2,668 ft.; F. 250 B.O. in 14 hrs. by hds. while fsg.

Flynn et al No. 1 Work, NE SE SE Sec. 19-8-7. Wlx. 4,276-92 ft.; set pipe.

Washita County

Continental Oil Co. No. 1 Proctor, C NW Sec. 28-10-20w. Drlg. 12,668 ft.

John Koberg No. 1-A Harms, C NW NE Sec. 6-10-16w. T.D. 6,000 ft.; tools moved out.

L. B. McWhirter No. 1 fee, NW SW SW Sec. 34-8-19w. Drlg. 2,245 ft.

SOUTHERN OKLAHOMA

Carter County

Pure Oil Co. No. 1 Noble, NE SE Sec. 35-3s-1e. T.D. 8,500 ft.; P.B. 6,530 ft.; tstd. wtr. at 6,319 ft.; set 7-in. 4,632 ft.; tstd. Hntn. 4,638-4,737 ft.; to tst. upper formations.

Choctaw County

Clyde Ross et al No. 1 Hardy, SE SE NW Sec. 21-7s-15. Drlg. sh. 1,550 ft.

Jefferson County

Bridwell Oil Co. No. 1-J Seay, SE NE SW Sec. 29-6s-5w. O.W.D.D.; T.D. 1,905 ft.; abd.

Marshall County

Hughes et al No. 1 Vittitto, C NE SE Sec. 11-5s-4e. O.W.D.D.; O.T.D. 7,100 ft.; T.D. 7,110 ft.; S.D.

Tillman County

Oil Inv. No. 2 Hammell, NE NW NW Sec. 6-5s-15w. O.W.D.D.; O.T.D. 2,829 ft.; T.D. 3,353 ft.; S.D.

KANSAS

Week Ending June 24 (Descriptions are East unless marked otherwise)

Atchison County

Earl Wakefield et al No. 1 Natl. Life Ins., C NW NE Sec. 17-6-20. Rlg.

Barton County

Armer and Vernon O. & G. Co. No. 1 Hoffman, NW NW SW Sec. 18-16-11w. Drlg. 2,595 ft.

B. B. & M. Drlg. Co. No. 1 Esfeld, NW NW SE Sec. 28-16-11w. Drlg. 2,435 ft.

Broswood Oil and Earl Wakefield No. 1 Rule, NW SW NE Sec. 2-16-13w. Drlg. 2,635 ft.

J. A. Brouk et al No. 1 Pospishel, NE NE SE Sec. 20-17-15w. Topk. 3,010 ft.; T.D. 3,252 ft.

R. E. Day et al No. 1 Feltes, SE SE NE Sec. 14-16-12w. O.W.D.D. O.T.D. 1,875 ft.; S.D. 3,342 ft.

Butler County

Carey & Jennings No. 1 Kelly, C SW Sec. 20-27-4. T.D. 1,790 ft.; rng. csg.

Elbar Corp. No. 1 Martin, NE SE SE Sec. 34-26-7. Drlg. 2,230 ft.

G. S. Lucas and White Star Oil No. 1-A Lucas, NE NW NW Sec. 14-28-6. Fsg. 775 ft.

Comanche County

Kerr-Lynn et al No. 1 McMoran, C SE NW Sec. 25-34-16w. T.D. 1,060 ft.; W. O.C.

Cowley County

Cities Service No. 1 Pope, SE NE SW Sec. 21-31-3. Arb. 3,458 ft.; H.F.W. 3,464-69 ft., T.D.; D.&A.

Hartman & Blair No. 1-A Brown, SE SE NW Sec. 33-30-4e. Drlg. 2,517 ft.

J. R. Lowell et al No. 1 Olsen, NE NE SE Sec. 13-35-7. Loc.

Western Kans. O. & R. Co. No. 1 Gregory, SE SE NW Sec. 2-34-6. Rlg.

Dickinson County

Franks et al No. 1 Huffman, NW NW SW Sec. 11-13-1. Drlg. 2,774 ft.

Douglas County

Three Star Oil Co. No. 1 Griffith, C NW SE Sec. 4-14-8e. M.I.M.

Ellis County

Central Pet. No. 4 Hadley, NE NE SE Sec. 12-11-18w. Lans. 3,054 ft.; T.D. 3,162 ft.; drld. cmt. to 3,155 ft.; shot at 3,068-3,105 ft.; acd.; P. 25 B.O. and 25 B.W.P.H.; T.D. 3,345 ft.; U.R. 5-in.

K. F. Nelson No. 1 Novak, NW NW NE Sec. 36-13-16w. Topk. 2,821 ft.; C.O. 2,870 ft.

Ellsworth County

I. W. Murfin No. 1 Loula, NW NW SE Sec. 28-16-10w. Topk. 2,620 ft.; drlg. 2,675 ft.

I. W. Murfin No. 1 Zajic, C S½ SW NE Sec. 31-16-10w. M.I.M.

Geary County

Scheu & Tague No. 1 Ave, NW SW NW Sec. 10-12-8. Drlg. 1,909 ft.

Gray County

Champlin Ref. No. 1 Dirks, C NE SW Sec. 34-28-29w. Drlg. 4,865 ft.

Greenwood County

Austin Reed et al No. 1 Sowder, SE SE NW Sec. 31-25-13. T.D. 1,597 ft.; shot and S. 1 B.O.P.H.

C. L. Sheedy No. 1 Gilroy, C E½ NE NW Sec. 13-25-12. R.U. mch.

Harvey County

Western Kans. O. & R. Co. et al No. 1 Mooreshead, SW SW SW Sec. 24-23-1w. R.U.R.

Haskell County

United Prod. No. 1 Illinois, NW NW SE Sec. 31-29-34w. Gas 2,614 ft.; T.D. 2,737 ft.; ga. 8,315 cu. ft. gas.

Kingman County

Skelly Oil Co. No. 1 Miller, CSL N½ NE Sec. 31-27-10w. Cellar.

Kiowa County

Sinclair Prairie No. 1 Price, NW NW SW Sec. 22-28-20w. Miss. 4,910 ft.; drlg. 5,175 ft.

Marion County

Tide Water Asso. and Ward McGinnis No. 1 Junghanns, SE SE SE Sec. 23-18-5. Lans. 1,576 ft.; S.D. 1,995 ft.

Miami County

Dave Judd No. 1 Waite, CNL SW SE Sec. 4-15-25. S.D. 732 ft.

Osage County

J. M. Edwards No. 1 Detrick (O.W.D.D.), C NW SE Sec. 21-14-15. O.T.D. 1,200 ft.; drlg. 1,573 ft.

Phillips County

Blue Stem Oil Co. No. 1 Donaldson, SE NE NE Sec. 25-5-18w. Lans. 3.080 ft. T.D. 3,164 ft.; acd. and P. 276 B.O. in 8 hrs.; pot. 827 B.O.; comp.

Reno County

Herndon Drlg. Co. No. 1 Compton, CEL SE NW Sec. 31-25-10w. M.I.M.

Rice County

Bradley Oil No. 1 Ruhl, C E½ NE NW Sec. 24-19-10w. Drlg. 1,850 ft.

Bridgeport Mch. No. 1 Pierce, CSL N¼ NE Sec. 29-20-7w. Miss. 3,305-07 ft., T.D. 3,345 ft.; S.S.O.

Carey et al No. 1 Link, SW NW SE Sec. 19-19-9w. Lans. 2,923 ft.; S.S.O. 3,004 ft.; cg. 3,235 ft.

Central Pet. No. 1 Dippel, CNL NE SE Sec. 27-19-10w. T.D. 3,315 ft.; Arb. 3,292 ft.; S. 142 B.O. in 4 hrs.

Finston & Co. et al No. 1 Hathaway, CNL NW SW Sec. 27-19-10w. Drlg 2,990 ft.

Fred Jones No. 1 Habiger, NE NE SW Sec. 9-18-10w. Drlg. 2,285 ft.

Frank Hollow et al No. 1 Guldner, SE SE SE Sec. 5-18-9w. R.U.

Lario O. & G. Co. No. 1 Link, SE SE SW Sec. 17-19-9w. Drlg. 2,800 ft.

Lauck & Moncrief No. 1 Schoonover, SW SW SE Sec. 20-18-9w. Drlg. 2,545 ft.

Nelson Drlg. Co. No. 1 Hodge, NW NW NE Sec. 25-20-6w. Lans. 2,890 ft.; Miss. 3,301-03 ft.; T.D. 3,336 ft.; 2,000 ft. O.I.H.; no test.

Phoenix Drlg. No. 1 Linville, SW SW SE Sec. 4-20-10w. Drlg. 35 ft.

E. J. Shaffer No. 1 Bauer, C W½ SW SW Sec. 23-21-7w. W.O.C. 83 ft.

C. H. Weaver No. 1 James, NE NW SW Sec. 25-19-10w. B.R.R.

Rooks County

Broadview Oil No. 1 Baxter, NE SW SW Sec. 35-8-16w. T.D. 940 ft.; U.R. 10-in.

Web-Son Oil et al No. 1 Blair, SE NE NW Sec. 34-10-19w. Simp. 3,667 ft.; Arb. 3,693-3,707 ft., T.D.; drld. plug and H.F.W.; D.&A.

Russell County

Braden & McClure No. 1 Blehm, SW SW NW Sec. 11-14-14w. Drlg. 2,215 ft.

Central Pet. No. 1 Crisman, SW NW NE Sec. 20-14-14w. Loc.

Cities Service No. 1 Dutt, NW NW SE Sec. 18-13-14w. Pay 3,130-33 ft., T.D.; P. 80 B.O. in 8 hrs.

Phillips Pet. No. 1 Maier, SW SW NE Sec. 15-15-14w. Drlg. 2,818 ft.

Shell Oil Co. No. 1 Berrick, NW NW SE Sec. 13-15-13w. M.I.M.

A. H. Witt No. 1 Speere, SW SW NE Sec. 7-14-14w. Rig.

Sherman County

Goodland Ind. Gas Co. No. 1 Wilcoxson, SE NW Sec. 27-8s-39w. T.D. 1,100 ft.; est. 25,000 cu. ft. gas.

Stafford County

Stanolind O. & G. No. 2 Sittner, NE SW SW Sec. 3-22-12w. Drlg. 2,309 ft.

Virginia Drlg. No. 1 Tieperman, NE NE SW Sec. 29-21-12w. R.U.R.

Sumner County

Burke-Greis No. 1 Seyfert, SE SE SE Sec. 18-34-2. Miss. 3,782 ft.; Simp. 3,860 ft.; Arb. 3,938 ft.; T.D. 3,960 ft.; D.&A.

E. W. Shawver No. 1-C Hitchcock, C N½ NE NE Sec. 16-30-1w. Miss. 3,557-60 ft.; T.D. 3,625 ft.; S.D.O.

Woodson County

Roby et al No. 1 Meairs, SW SW NW Sec. 21-25-14. Bville. 1,367-70 ft.; S.O.; S.D.

MISSOURI

Andrew County

Bradley Bros. et al No. 1 Gee, NW NW SE Sec. 28-60n-35w. T.D. 715 ft.; S.D.

Jones & Hyde No. 1 Holt, SE NW NE Sec. 34-60-35w. T.D. 150 ft.; fsg.

Bollinger County

Delmund Oil No. 1 Cooper, SE SE SE Sec. 14-29-9e. Drlg. 1,450 ft.

Butler County

Coastal Pet. et al No. 1 Pierson, SW NE NW Sec. 27-22-6e. T.D. 131 ft.; W.O.C.

Clay County

Eastern Drlg. Co. No. 1 Williams, NW NW NE Sec. 28-53-32w. S.S.O. 475-80 ft.; gas 595 ft.; drlg. 660 ft.

Frank Hopper et al No. 1 Black, NW NW NW Sec. 36-52-32w. Arb. 1,657 ft.; H.F.W. 1,670-80 ft., T.D.; D.&A.

Clinton County

C E King et al No. 1 Willis, NE SE SE Sec. 13-55n-32w. Miss. 895 ft.; drlg. 1,333 ft.

DeKalb County

Geo. W. Moore No. 1 McQuate, NE SW SW Sec. 11-57n-31w. Miss. 1,075 ft.; fsg. 1,210 ft.

Hickory County

J. W. Sims No. 1 Wilson, NW NW NW Sec. 3-37n-21w. S.D. 1,624 ft.

Holt County

Brin & Nathan No. 1 Decker, C NW NW Sec. 1-61-38w. Spd. and S.D.

Brin & Nathan No. 1 Garrett, C NE NE Sec. 1-61n-38w. Loc.

Markham et al No. 1 Gaffney, SW SE SW Sec. 24-63-40w. R.R.

J. H. Everitt et al No. 1 Spring, SW SW SE Sec. 30-62-38w. T.D. 2,601 ft.; S.D. for D.P.

Jackson County

Joe G. Kelly No. 1 fee, NE SW NE Sec. 26-51-34w. Sd. 610-15 ft.; S.S.O.&G.; T.D. 730 ft.; D.&A.

Missouri Valley G. & O. Co. No. 1 Young, SW NW NE Sec. 30-51-34w. S.D. 345 ft.

Mercer County

Geo. W. Moore No. 1 Castell, NE NE NE Sec. 32-65-24w. Loc.

Platte County

Berry Bros. No. 1 Rule, C SW SW Sec. 20-53-33w. Bville, 812-914 ft.; Burgess 958-61 ft.; drlg. 1,160 ft.

Putnam County

E. F. Slater et al No. 1 Sayer, NE NW SE Sec. 14-65-18w. St. Peter sd. 1,375-1,525 ft.; showed fresh wtr.; drlg. 1,528 ft.

Schuyler County

T. E. Baldwin No. 1 May Johnson, NW NE NE Sec. 21-65-15w. R.U. mch.

Shelby County

Wright & Turner No. 1 Turner, C NW NW Sec. 27-59n-9w (wildcat). S.D. 215 ft.

Sullivan County

H. V. Elwell No. 1 Taylor, CNL S½ S½ Sec. 12-62-21w. Rig.

NEBRASKA

Cass County

Golden Rod Oil Co. No. 1 Sparer, SE SE SE Sec. 8-11-13e. S.D.

Hitchcock County

C. L. Price No. 1 Carter, SE NE SW Sec. 35-2n-32w. Lans. 3,976 ft.; S.D. 4,000 ft.; S.O.

Scotts Bluff County

J. A. Fairy Pet. Corp. No. 1 McCully, C SE SE Sec. 35-23n-58w. Set 6-in. 1,407 ft.; C.O. 1,515 ft.

Albert Wood No. 1 McHenry, SE NE NE Sec. 33-23n-57w. T.D. 625 ft.; C.O.

ARKANSAS

Bradley County

Amerada Pet. Corp. No. 1 Bradley Lbr. Co., 660 ft. N, 460 ft. E, SW cor. SE NE Sec. 14-17-10. M.I.M.

Columbia County

Ark. Fuel Oil Co. No. 1 Glasgow-Crisp, 603 ft. N, 605 ft. W, SE cor. NE SW Sec. 23-17-20. Drlg. rd.&gr. sh. 5,669 ft.

Atlantic Ref. Co. No. 1 J. A. Foster, C NW NE Sec. 24-17-20. T.D. 4,026 ft.; P.B. 3,195 ft.; drlg. gr. sh. 4,790 ft.

Atlantic Ref. Co. No. 1 Pine Woods Lbr. Co., C NE NE Sec. 16-18-22. Set 9⅝-in. csg. 4,102 ft.; cg. 5,556 ft.

Atlantic Ref. Co. No. 1 L. Spain, C SW SW Sec. 18-17-19. Drlg. 545 ft.

Lion Oil Ref. Co. No. 1 Tissue, C SW NW Sec. 15-18-19. Drlg. 6,663 ft.

Mid-Continent Pet. Corp. No. 1 Foster, C NE SW Sec. 24-17-20. Drlg. 2,135 ft.

Phillips Pet. Co. No. 1 J. A. Joiner, C SE NE Sec. 22-17-20. Drlg. rd.&gr. sh. 5,935 ft.

Phillips Pet. Co. No. 1 L. A. Longino, C SW SE Sec. 15-17-20. T. Smkvr. L. 7,390 ft.; drlg. 7,403 ft.

Placid Oil Co. No. 1 R. A. Couch, C NW NW Sec. 19-17-19. Drlg. rd. sh. 6,744 ft.

Shell Pet. Corp. No. 1 Peoples Bnk. of Columbia, C NW SW Sec. 24-17-20. Drlg. rd. sh. 6,550 ft.

Southwood Oil Co. No. 2 Foster, C SE NE Sec. 24-17-20. R.U.

Southwood Oil Co. No. 1 D. Glasgow et al, C NE NE Sec. 22-17-20. Drlg. 1,306 ft.

Standard Oil Co. of La. No. 1-B Lewis Unit, 660 ft. SW cor. NE NE Sec. 15-17-19. T.D. 2,469 ft.; set 9⅝-in. csg. 2,450 ft.; W.O.C.

G. H. Vaughn No. 2 Baker, C NE SE Sec. 15-17-20. Set 5½-in. csg. 7,535 ft.; cd. 7,515-75 ft.

G. H. Vaughn No. 1 L. Paschal, C SE NW Sec. 22-17-20. Drlg. rd.&gr. sh. 5,227 ft.

Craighead County

Tanmark, Inc., No. 1 R. M. Martin, Sec. 35-14-3e. Drlg. L. 2,243 ft.

Lafayette County

East Texas Ref. Co. et al No. 1 Warren Est., C N½ NE NW Sec. 24-16-24. Set 10¾-in. csg. 1,210 ft.; drlg. plug.

Standard Oil Co. of La. No. 6 McKean, 660 ft. NE cor., SE SW Sec. 7-16s-22w. Drlg. L.&sh. 6,451 ft.

J. C. Stephens No. 1 J. A. Allen, C N½ NW NW Sec. 30-16-23. Set 10¾-in. csg. 112 ft.; W.O. 115 ft.

Little River County

C. & M. Drlg. Co. No. 1 Strawn, SW cor. SE Sec. 20-10-32. Cd. 1,270-80 ft.; sh.& wtr. sd.; reported S.O. 1,365-70 ft.; 1,542-64 ft. sd. and 1,564-74 ft. sdy. L.; cor. T.D. 1,598 ft.; set 7-in. csg. 1,590 ft. (cor.); T.D. 1,750 ft.; S.D.

Lonoke County

Cabot Drlg. Club, Inc., No. 1 Benson townsite, Sec. 18-4n-9w. Reported S.O. 1,400-50 ft.; hole clean; ran survey to 2,573 ft.; P.B. 1,470 ft.; set 4¾-in. csg. 1,390 ft.; T.D. 1,470 ft.; W.O.

Miller County

Vacarro & Waterman No. 1 Westbrook, C SW SW Sec. 1-20-28. T. por. L. 6,-165 ft.; set 5½-in. csg. 6,192 ft.

Ouachita County

J. E. Crosbie, Inc., No. 2 F. A. Laney, Sec. 36-15-16. Stk. 5⅛-in. 2,777 ft.; set 966 ft. at 2,777 ft.; W.O.C.; T.D. 2,832 ft.; perf. 2,678-82 ft.; tstd. est. 2,000 ft. S.W.; P.B. 2,550 ft.; drld. out to 2,626 ft.; reperf. csg. 2,570-82 ft.; S.W.; reperf. csg. 2,586-96 ft.; pmpd. S.W.; P.B. 2,420 ft. and will perf. 2,282-88 ft.

Phillips Pet. Co. No. 1 J. D. Reynolds, 330 ft. SE cor. SE NW Sec. 27-15-15. O.W.W.O.; O.T.D. 4,926 ft.; comp. as disc. well, Snow Hill field; perf. csg. 2,732-35½ ft., 2,728-31½ ft., 2,744-47½ ft., and 2,756-60 ft.; est. 2,300 ft. F.I. H., 1% oil; P.B. 2,770 ft.; set cmt. retainer 2,719 ft.; sqzd.; S.D.; W.O. 2,746 ft.

Union County—Schuler

E. M. Jones No. 1-C Murphy Ld. Co., Sec. 24-18-18. Cd. Jones sd. 7,560 ft.; T.D. 7,640 ft.; set 7-in. csg. 7,620 ft.; perf. 7,560-85 ft.; swbg. to test.

Lion Oil Ref. Co. No. 1 S. Bessie, C S½ Lot 5, NW Sec. 7-18-7. 10¾-in. csg. 1,935 ft.; fsg. 3,092 ft.

Lion Oil Ref. Co. No. 2 Clay, 330 ft. N, 660 ft. W, SE cor. NE SW Sec. 12-18-18. Drlg. sh. 6,714 ft.

Lion Oil Ref. Co. No. 1 S. Frank, C S½ SW NE Sec. 12-18-18. Fsg. D.S. 6,022 ft.

Lion Oil Ref. Co. No. 1 S. John, SE cor. SE NE Sec. 12-18-18. Drlg. rd.&gr. sh. 7,119 ft.

Phillips Pet. Co. No. 1 Mill, NW cor. S½ Lot 4, SW Sec. 18-18-17. T. Jones sd. 7,547 ft.; cg. 7,587 ft.

Union County—Other

S. S. Alexander No. 1 J. P. Pickering, C NW NW SW Sec. 31-16-15. Cd. 2,151-52 ft.; soft por. sat. sd., salty taste; D.S.T. S.S.W.; cd. 2,152-56 ft.; rec. 2 ft. por. S.W. sd.; T.D., gr. limy sh. 2,407 ft.; washing to bttm.

J. R. Lockhart No. 1 P. Jerry, 665 ft. W, 235 ft. S, NE cor. NE SE Sec. 15-17-14. Set 10¾-in. csg. 108 ft.; arng. core 2,450 ft.

Bob Milam No. 1 Primm Est., SE cor. Lot 5, NE Sec. 1-16-16. S.D. 2,359 ft.

Sam Sebersky No. 3 J. N. Jerry, Sec. 21-17-14. Cd. 2,701-13 ft.; set 5½-in. csg. 2,718 ft.; recmtg. csg.

V. R. Sims et al No. 1 J. A. Kelly, 330 ft. SW cor., NW SW Sec. 9-17-14. Cd. 2,171-85 ft.; S.O.&G.; T.D., sdy. sh. 3,218 ft.; reported S.O. 2,656-67 ft.; sidewall cores S.O. 2,660 ft.; rng. 5½-in. csg. 3,508 ft.

NORTH MISSISSIPPI

Clarke County

Jeremiah L. Ryan et al No. 1 M. Eddins, 500 ft. SE cor. Sec. 29-2n-14e. S.D. 1,502 ft.

Lowndes County

Ryan & Anderson No. 1 Swoope, Sec. 3 19s-18w. Set 9-in. csg. 1,162 ft.; T.D. 4,006 ft.; abd.

Hinds County

Tatum et al No. 1 S. F. Johnson, NE cor. Sec. 29-6n-1w. S.D. 5,218 ft., sd.; arng. D.D.; erecting 122-ft. drk; sdtrkd. hole at 4,370 ft.; S.D. 6,500 ft.; P.B. 3,337 ft.; perf. csg. 3,330-21 ft.; swbd. S.W.

Humphreys County

Union Prod. Co. No. 1 C. B. Boy, Sec. 29-14n-4w. Cg. L. 3,570 ft.

Pike County

S. R. Crouch et al No. 1 E. P. Cupit, Sec. 25-2n-7e. S.D. 532 ft.

Prentiss County

Home Dev. Co. No. 1 Allen, Sec. 8-7s-9e. Drlg. L. 806 ft. (no report).

Simpson County

Cleve Love No. 1 N. E. Garner, SW cor. SW NE Sec. 1-10n-17w. S.D. 3,145 ft.

LOUISIANA

N. LOUISIANA WILDCATS

Bienville Parish

Ark. La. Gas Co. No. 2 Gayoso, 660 ft. SW cor. SE Sec. 14-16-10. T. Tr. Pk. 5,432 ft.; D.S.T. 5,796-5,805 ft. tstd. dry in 26 min.; set 8⅝-in. csg. 6,300 ft.; T.D. 8,319 ft.; set csg.; per. 8,285-8,314 ft.; flwd. est. 2,000,000 cu. ft. gas and sprayed S.W.; acdzd. with 6,000 gal. and tstd. est. 4,000,000 cu. ft. gas and spray S.W.; perf. 8,110-70 ft. and 8,306-12 ft.; flwd. 39 bbl. dist., 16 bbl. S.W. and 1,500,000 cu. ft. gas on ¼-in. ck.; acdzd. with 2,000 gal. and tstd. same; R.P. 2,818 lb.; drlg. sh.&L. 8,407 ft.; D.S.T. 8,310-8,404 ft.; S.G.

Hunt Oil Co. No. 1 T. A. Loe, C NE Sec. 2-16-6. Drlg. rd. sh. 8,553 ft.

Bossier Parish

H. M. Harrell et al No. 1 Thompson Unit, 70 ft. NW, C SE Sec. 20-17-11. Set 13⅜-in. csg. 183 ft.; W.O.C.

Caddo Parish

J. G. Bailey No. 2 Muslow, 672 ft. S, 396 ft. W, NE cor. SE NW Sec. 17-20-15. O.W.D.D.; O.T.D. 2,198 ft.; cg. 2,945 ft.

Frank G. Bandein No. 1 Caddo Levee Bd., 150 ft. S, 350 ft. W, NE cor. NW SE Sec. 26-21-16. R.U.

Burton & Harlan No. 1-A Perche, 500 ft. S, 747 ft. E, C Sec. 1-20-16. Set 10-in. 60 ft.; drlg. 500 ft.

Drillers, Inc., No. 1 Ellerbe, SW cor. Sec. 23-18-14. Set 5½-in. csg. 5,554 ft.; acdzd. with 3,500 gal. and tstd. 1,500 ft. O.I.H.; S.D.; W.O. 5,560 ft.

East Texas Ref. Co. No. 1 North Cent. Tex. Oil Co., SE cor. SW Sec. 4-23-15. Sat. L. 6,004-12 ft. and 6,043-55 ft.; set 5½-in. csg. 5,998 ft.; T.D. 6,086 ft.

East Texas Ref. Co. No. 1 Pill, SW cor. SE NW Sec. 4-23-15. Set 5½-in. csg. 6,023 ft.; T.D. 6,110 ft.; W.O.C.

W. C. Feazel and Eagle Prod. Corp. No. 1 Caddo Mercantile Co., 2,310 ft. W, 955 ft. S, NE cor. Sec. 5-23-15. R.U.; W.O.

M. M. Ferrell No. 1 Satterwhite, SE NW Sec. 10-20-16. Set 6-in. csg. 1,335 ft.; tstd. S.W.; S.O. 1,580 ft.; acdzd. with 3,000 gal.; tstd. S.W.; S.O.; S.D. 2,010 ft.; rng. 4½-in. csg. 2,263 ft.; tstg.

H. H. Groneman No. 1 Browning, 330 ft. SW cor. Sec. 22-22-16. O.W.D.D.; O.T.D. 2,695 ft.; drld. out to 2,631 ft.; swbg.; tstd. 1,800 ft. O.I.H.; T.D. 2,631 ft.; W.O.S.R.

H. H. Groneman No. 1 Lee, 330 ft. SW cor. NW Sec. 22-22-16. Drlg. sh. 1,950 ft.

Hamilton & Stone No. 1 Atlanta, 500 ft. S, 244 ft. W, NE cor. NW Sec. 2-20-16. Set 6-in. csg. 1,701 ft.; W.O.C.

Lisbon Iberia Oil Co. No. 1 Atkins, Sec. 2-17-14. Set 5½-in. csg. 5,627 ft.; T.D. 5,640 ft.; W.O.C.

C. H. Lyons et al No. 1 Agurs, 760 ft. N, 710 ft. W, SE cor. Sec. 34-18-14. Set 9⅝-in. csg. 1,302 ft.; drlg. sh.&L. 3,110 ft.

Natal Oil Co. No. 5 Stiles, 400 ft. NE cor. NW NW Sec. 27-21-16. Set 7-in. csg. 1,020 ft.; T.D. 1,024 ft.; W.O.S.R.

Natal Oil Co. No. 6 Stiles, 1,120 ft. E, 150 ft. N, SW cor. Sec. 22-21-16. Set 7-in. csg. 1,031 ft.; W.O.C.

W. R. Nicholson Oil Co. No. 1 Lane, 330 ft. SE cor. Sec. 28-22-16. Cg. 2,410 ft.

J. Ober & Sons No. 2 fee, 920 ft. N, 200 ft. W, C Sec. 36-2-16. Drlg. sh. 2,105 ft.

Oblinger & Ritter No. 3 Boisseau, 1,220 ft. N, 1,310 ft. E, SW cor. SE Sec. 34-21-16. S.D. 820 ft.

Red Iron Drlg. Co. No. 1 Agurs, 1,900 ft. S, 715 ft. E, NW cor. Sec. 25-18-14. R.U.

John Schmidt No. 2 Sprouil, 970 ft. N,

570 ft. W, SE cor. Sec. 32-20-16. R.U.
Seymour Oil Co. No. 1 Hughes et al, 330 ft. NE cor. NW Sec. 15-20-15. S.D. 1,-700 ft.; rig repair.
Stanolind O. & G. Co. No. 1, 131 Dillon Hrs., C SE NE Sec. 14-21-15. Set 16-in. csg. 494 ft.; drlg. sh.&L. 3,277 ft.
Joe Strahan No. 2 Hart, 1,208 ft. N, 320 ft. E, SW cor. Sec. 29-21-16. Set 6-in. csg. 2,214 ft.; tstg. 2,404 ft.
Joe Strahan No. 1 Stiles, SW cor. Sec. 29-21-16. Set 6-in. csg. 2,394 ft.; W.O. S.R. 2,397 ft.
Joe Strahan No. 2 Stiles, 3,658 ft. N, 1,050 ft. E, SW cor. Sec. 29-21-16. R.U.
Tippett Oil Co. No. 1 T. Bell, 330 ft. SW cor. NE Sec. 34-22-16. Set 5¼-in. csg. 2,438 ft.; T.D. 2,460 ft.; W.O.S.R.
Tippett Oil Corp. et al No. 3 Thigpen-Herold, 2,310 ft. N, 1,650 ft. E, SW cor. Sec. 34-22-16. Drlg. sh. 1,000 ft.

Caldwell Parish

Critchett & Woods (formerly E. T. Oakes) No. 1 Kyles, NE cor. SW NE Sec. 18-11-3e. S.D. 2,476 ft.; W.O.

Catahoula Parish

Ross Morel et al No. 1 Ballard Est., 330 ft. SE cor. SE SW Sec. 8-9n-7e. Drlg. sh. 657 ft.

De Soto Parish

Daniel Murray No. 1 Russell, 50 ft. N, 500 ft. W, SE cor. NE NW Sec. 12-11-16. O.W.D.D.; O.T.D. 2,046 ft.; T.D. 2,-168 ft.; drlg. sh 2,240 ft.

La Salle Parish

Snow Black Oil Co. No. 2 Tullos, SW cor. SE Sec. 23-10-1e. R.U.; S.D.

Sabine Parish

Ed Bailey No. 1 Hale, 330 ft. NW cor. NE NW Sec. 6-7-12. Set 10-in. csg. 60 ft.
Geo. Ellis No. 1 Walker, 500 ft. NW cor. NW SE Sec. 8-4-12. Set 12½-in. csg. 276 ft.; reported S.O. 2,180 ft. and 2,263-65 ft.; rng. csg. 2,269 ft.; cd. sdy. sh. 2,265-69 ft.; set 7-in. csg. 2,250 ft.; drlg. 2,369 ft.
Okla.-Tex. Tr. No. 2 Frost Lbr. Ind., 330 ft. SE cor. NE SW Sec. 22-9-13. Set 12½-in. csg. 84 ft.; 8-in. csg. 1,568 ft.; T. chk. rk. 1,568 ft.
W. M. Quick No. 1 Sabine, SE cor. NE NE Sec. 8-7-13. Tstd. S.O. 2,397 ft.; W.O.
H. M. Sneed No. 1 Leone, SW cor. NW SE Sec. 8-7-13. T.D. 1,962 ft.; S.D.; repair.
A. Tillman No. 1 Ritter, 400 ft. NE cor. SE SW Sec. 26-8-12. S.D. 1,900 ft.
J. A. Williams No. 1 Long Bell Lbr. Co., 250 ft. S. 550 ft. W, C Sec. 33-8-14. Drlg. sh. 1,170 ft.

Tensas Parish

Continental Oil Co. No. 1 Cammack, 1,-690 ft. S, 330 ft. W, NE cor. Sec. 31-13-12e. Set 10¾-in. csg. 1,523 ft.; drlg. sh. 3,075 ft.

Webster Parish

Geo. Barham No. 1 A. J. Hodges, 1,916 ft. N, 728 ft. E, SW cor. Sec. 23-21-10. O.T.D. 4,574 ft.; jnkd. hole; skdg. over.
Hunt Oil Co. No. 1 Coffee, C SW NW Sec. 19-21-9. Drlg. anhy. 4,346 ft.
Hunt Oil Co. No. 30 Hope, 100 ft. W. C NE SW Sec. 30-21-10. Drlg. sh.&L. 7,-155 ft.
Hunt Oil Co. and Magnolia Pet. Co. No. 1 Gray-Cox, SW cor. Sec. 19-21-9. Drlg. hd. sd. 7,802 ft.
Hunt Oil Co. No. 1 Stewart, NW SE Sec. 32-21-10. Set 9⅝-in. 5,672 ft.; T. Cotton Valley 8,074 ft.; T. "D" sd. 8,-450 ft.; light O.S.; cg. ahd. 8,473 ft.
Magnolia Pet. Co. No. 1 Roseberry Unit, 20 ft. N and W. C SE Sec. 29-23-9. Drlg. sd.&sh. 7,224 ft.
Ohio Oil Co. No. 6 Bodcaw, Acct. 4, 660 ft. NE cor. NW Sec. 13-21-10. Drlg. sd.&sh. 5,325 ft.
Oliphant Oil Corp. No. 2-A Hodges, 660 ft. W, 460 ft. S, NE cor. Sec. 3-20-10. Drlg. rd. sh.&L. strks, 3,367 ft.
O. F. Shaver No. 1 Stewart, 150 ft. S, 563 ft. E, NW cor. SW NE Sec. 4-18-10. R.U.
Stanolind O. & G. Co. No. 2 Pardee, Sec. 25-21-10. Drlg. 1,085 ft.
Union Prod. Co. No. 1 Walker Unit, 50 ft. S, C SE Sec. 30-18-8. Set 9⅝-in. csg. 6,490 ft.; T. Pettit 6,665 ft.; T. Tr. Pk. 6,910 ft.; drlg. sh.&L. 10,315 ft.

SOUTH LOUISIANA FIELDS

Abbeville—Vermilion Parish

Continental Oil Co. No. 1 Alfred Boudoin, Sec. 58-12s-3e. Drlg. sh. 8,111 ft.
Continental Oil Co. No. 1 David Meaux, Sec. 9-12s-3e. R.U.
Continental Oil Co. No. 1 Franciol, Sec. 67-12s-3e. Drk.
Continental Oil Co. No. 1 Lucion Duhon, Sec. 17-12s-3e. T.D. 10,762 ft.; 7-in. csg. 10,316 ft.; P.B. 10,201 ft.; cd. sd., S.O. &G. 10,112-70 ft.; perf. csg. 10,140-55 ft.; rec. mud and gas; perf. csg. 10,-159-60 ft.; run tbg.
Stanolind O. & G. Co. No. 1 Blanchet, Sec. 67-12s-3e. T.D. 8,009 ft.; 7-in. csg. 7,938 ft.; perf. csg. 7,880-85 ft.; I.P. 33 bbl. dist. per day; 12/64-in. ck.; killed well; perf. csg. 7,864-68 ft.; tstg.

Bancroft—Beauregard Parish

Republic Prod. Co. No. 8 Columbia Ld. & Tbr. Co., Sec. 15-6s-13w. T.D. 7,336 ft.; 5½-in. csg. 7,328 ft.; I.P. 300 B. P.D.; ½-in. ck.
Republic Prod. Co. No. 4 Lutcher Moore Lbr. Co., Sec. 16-6s-13w. Abd. loc.
Republic Prod. Co. No. 7 Lutcher Moore, Sec. 14-6s-13w. T.D. 8,000 ft.; 5½-in. csg. 7,963 ft.; oil sd. 7,901-06 ft.
Republic Prod. Co. No. 8 Lutcher Moore Lbr. Co., Sec. 14-6s-13w. R.U.
Republic Prod. Co. No. 1 Nettie Smith Sec. 15-6s-13w. Loc.

Bateman Lake—St. Mary Parish

Texas Co. No. 2 State-Bateman Lake, Sec. 21-16s-12e. 13⅜-in. csg. 1,700 ft.; T.D. 9,453 ft.; sdtrkd. 6,880 ft.; drld. into old hole; P.B. 6,580 ft.; sdtrkd.; T.D. 9,156 ft.; P.B.; sdtrkd.; drlg. sh. 9,219 ft.

Baton Rouge—East Baton Rouge Parish

W. V. Bowles No. 1 Richard Community, Sec. 46-7s-1e. T.D. 6,676 ft.; 5½-in. csg. 4,395 ft.; to test 4,345-55 ft.
Geo. Echols No. 1 Evans Duplantier, Sec. 68-7s-1w. T.D. 6,506 ft.; 7-in. csg. 6,-494 ft.; I.P. 240 B.P.D.; 5/32-in. ck.
Geo. Echols No. 1 J. Gebelin, Sec. 66-7s-1w. Bldg. rd.
Geo. Echols No. 1 Geo. F. Morgan, Sec. 68-7s-1w. T.D. 6,506 ft.; 7-in. csg. 6,-481 ft.
Guaranty Oil Co. No. 1 D. J. Morgan. 9⅝-in. csg. 1,169 ft.; T.D. 3,708 ft.; P. B. to 2,065 ft. to strghtn. hole; sdtrkd.; T.D. 6,539 ft.; P.B. to sdtrk.; drlg. sh. 4,480 ft.
Wm. Helis No. 3-D Duplantier, Sec. 66-7s-1w. M.I.M.
Wm. Helis No. 1 Farris-Middleton, Sec. 66-7s-1w. Loc.
Geo. Helis et al No. 1 Haase Community, Sec. 64-7s-1e. S.D. 7,303 ft.
Wm. Helis No. 1-D Duplantier, Sec. 66-7s-1w. Drlg. sh. 6,306 ft.
Wm. Helis No. 1 P. Mazzarisa, Sec. 66-7s-1w. Drlg. sh. 3,926 ft.
Lisbon-Iberia Oil Co. No. 2 Duplantier, Sec. 66-7s-1e. T.D. 6,469 ft.; 7-in. csg. 6,454 ft.
T. G. Markley-Crosby Drlg. Co. No. 1 Knox et al, Sec. 66-7s-1w. 10¾-in. csg. 1,960 ft.; cg. sh.&sd. 6,466 ft.
T. G. Markley-Crosby Drlg. Co. No. 2 Knox et al, Sec. 66-7s-1w. Loc.

Bay St. Elaine—Terrebonne Parish

Texas Co. No. 3-B State-Bay, Sec. 13-22s-17e. Drlg. sh.&L. 10,513 ft.
Texas Co. No. 19 State-Bay St. Elaine, Sec. 18-22s-18e. Loc.

Bayou Blue—Iberville Parish

Humble O. & R. Co. No. 11 Wilberts, Sec. 67-9s-11e. Loc.

Bayou des Allemands—St. Charles Parish

Amerada Pet. Corp. No. 4 St. Charles Ld. Co., Sec. 13-15s-2e. Loc.

De Large—Terrebonne Parish

Fohs Oil Co. No. 1 Buckley-Mahler, Sec. 25-19s-16e. 13⅜-in. csg. 3,380 ft.; 9⅝-in. csg. 10,058 ft.; drlg. sh. 11,916 ft.

Caillou Island—Terrebonne Parish

Texas Co. No. 1-B State-Caillou Island, Sec. 19-23s-20e. 9⅝-in. csg. 5,482 ft.; T.D. 5,606 ft.; abd.
Texas Co. No. 29 State, Sec. 17-23s-20e. Rig.

Cameron Meadows—Cameron

Burton-Sutton Oil Co. No. 26 Sch. Ld., Sec. 16-14s-13w. T.D. 2,465 ft.; 13⅜-in. csg. 2,465 ft.; T.D. 6,564 ft.; P.B.; sdtrkd.; T. salt 8,059 ft.; T.D. 8,065 ft.; P.B. to 2,845 ft.; sdtrkd.; T.D. 7,-172 ft.; fsg.; set whpstk. 7,082 ft.; stk. D.S.
Magnolia Pet. Co. No. 24 Cameron Meadows Ld. Co., Sec. 21-14s-13w. Top salt 5,246 ft.; P.B. to sdtrk.; T.D. 5,348 ft.; 7-in. csg. 5,223 ft.; perf. csg. 5,160-75 ft.; rec. dry gas.

Chacahoula—La Fourche Parish

Sun Oil Co. No. 1 Cypress, Sec. 75-15s-15e. Dredge canal.
Sun Oil Co. No. 4 Delbert Stark and Brown Cypress Co., Sec. 70-15s-15e. T.D. 7,794 ft.; P.B. 6,764 ft.; sdtrkd.; T.D. 8,268 ft.; stk. D.S.; shot at 8,195 ft.; P.B. 7,642 ft.; sdtrkd. 7,642 ft.; T. D. 8,260 ft.; 9⅝-in. csg. 8,260 ft.; T.D. 8,292 ft.; cleaned hole; found csg. collapsed; recmtd. csg.; rmg. 7,176 ft.; found leak in csg.; recmtd.; P.B. 7,969 ft.; sdtrkd. 8,249 ft.; P.B. 2,200 ft.; W.O.C.

Chalkley Field—Cameron Parish

Humble O. & R. Co. No. 4 Hanzen, 10¾-in. csg. 2,745 ft.; cg. sh. 8,429 ft.

Charenton—St. Mary Parish

Fifteen Oil Co. No. 1 T. Brulation, Sec. 19-13s-10e. 7-in. csg. 8,509 ft.; drlg. sdy. sh. 9,247 ft.
Pan American Prod. Co. No. 1 Achee, Sec. 21-13s-9e. Loc.
Pan American Prod. Co. No. 14 Laws Realty Co., Sec. 30-13s-10e. T.D. 7,405 ft.; P.B. 6,950 ft.; sdtrkd.; drlg. sh. 8,-005 ft.
Pan American Prod. Co. No. 7 Robichaux, Sec. 11-13s-9e. T.D. 1,051 ft.; 7-in. 1,035 ft.; R.U. to pmp.
Pan American Prod. Co. No. 5 South Coast, Sec. 30-13s-10e. Drlg. sh. 8,-574 ft.

Chenoyville—Rapides Parish

Gulf Oil Corp. No. 1 M. B. Pope, Sec. 4-1s-2e. Drlg. sh. 6,211 ft.
Texas Canadian Oil Co. No. 2 Pope, Sec. 56-1s-2e. Drlg. sh. 4,620 ft.

Convent—St. James Parish

Continental Oil Co. No. 2 Colonial Sugars, Inc., Sec. 50-12s-4e. 18⅝-in. csg. 220 ft.
Continental Oil Co. No. 2 Realty Operators, Inc., Sec. 16. 13⅜-in. csg. 1,-492 ft.; T.D. 7,889 ft.; P.B. 7,275 ft.; sdtrkd. 7,305 ft.; T.D. 8,235 ft.; well blew out; caught fire; cleaned hole to 4,866 ft.; P.B. 2,502 ft.; sdtrkd.; T.D. 7,967 ft.; 9⅝-in. csg. 7,950 ft.; drlg. sh. &sdy. sh. 8,749 ft.

Darrow—Ascension Parish

Humble O. & R. Co. No. 22 Community, Sec. 32-10s-2e. R.U.
Humble O. & R. Co. No. 5 Landry, Sec. 34-10s-2e. Drlg. L. 6,265 ft.
Kiva Oil Co. No. 1 Duplessis, Sec. 69-10s-2w. S.D. 2,523 ft.

Dog Lake—Terrebonne Parish

Texas Co. No. 5 Dog Lake, Sec. 5-22s-16e. Drlg. sh. 7,341 ft.

Edgerly Field—Calcasieu Parish

J. G. Sutton Oil Co. No. 1 Reed, Sec. 29-9s-11w. R.U.R.

Eola—Avoyelles Parish

Amerada Pet. Corp. No. 1 Avoyelles Bnk. & Tr. Co., Sec. 5-2s-3e. Drlg. sh. 2,-425 ft.
Amerada Pet. Corp. No. 1 Haas Inv. Co., Sec. 10-2s-2e. Drk.
Amerada Pet. Corp. No. 2 Mrs. C. B. Machine, Sec. 6-2s-3e. Loc.
Amerada Pet. Corp. No. 1 Merchants & Planters Bnk., Sec. 41-1s-3e. Loc.
Amerada Pet. Corp. No. 1 Robert Irion, Sur., Sec. 6-2s-3e. 9⅝-in. csg. 1,462 ft. drlg. sh. 5,200 ft.
W. C. Feazel No. 1 Leila Keller, Sec. 7-2s-1e. Drlg. sh. 2,100 ft.
Gulf Expln. Co. No. 5 Samuel Haas Est., Sec. 8-2s-3e. T.D. 7,006 ft.; P.B. 6,450 ft.; crooked hole; sdtrkd.; T.D. 8,584 ft.; 5½-in. csg. 8,584 ft.
Geo. E. Lilly et al No. 1 Haas Inv. Co., Sec. 1-2s-2e. S.D. 195 ft.
Pomo Prod. Co. No. 2 Sentell, Sec. 8-2s-3e. Drlg. sh. 2,375 ft.
Sid Richardson No. 5 Haas Inv. Co., Sec. 5-2s-3e. T.D. 8,565 ft.; 5½-in. csg. 8,-565 ft.; perf. csg. 8,470-8,540 ft.; tstg.
Sid Richardson No. 1 S. S. Pierce, Sec. 6-2s-3e. T. sd. 8,406 ft.; cg. sd. 8,576 ft.
Sid Richardson No. 2 State Bayou Boenf, Sec. 7-2s-3e. Drlg. sh. 1,668 ft.

Garden Island—Plaquemines Parish

Texas Co. No. 34 State, Sec. 38-23s-33e. T.D. 4,600 ft.; 7-in. csg. 4,574 ft.; no report.

Golden Meadows—La Fourche Parish

Geo. Lilly et al No. 1 Jack Collins, Sec. 12-19s-22e. Drlg. sh.&L. 7,768 ft.
M. H. Marr and R. A. Bristol No. 1 Church property, Sec. 2-19s-22e. Drk.
M. H. Marr and G. H. Vaughn No. 1 B. & D. Unit, Sec. 12-19s-22e. 10¾-in. csg. 2,301 ft.; cg. sd.&sh. 8,169 ft.
Martex Pet. Corp. No. 2 Falgout Holding Co., Sec. 9-19s-22e. R.U.
St. Mary Oil Co. No. 1 Choust Unit, Sec. 12-19s-22e. Drlg. sh. 2,353 ft.
Taylor Fithian et al No. 1 Etenne Perrin, Sec. 12-19s-22e. R.U.
Texas Co. No. 2 State-Catfish Lake, Sec. 3-20-21e. Drlg. sh.&shlls. 5,626 ft.
Texas Co. No. 3 State-Catfish Lake, Sec. 76-19s-21e. Loc.
John Vocarro et al No. 1 D. and B. Cheramine, Sec. 12-19s-22e. R.U.

Grand Bay—Plaquemines Parish

Gulf Oil Corp. No. 4 Grand Prairie Lve. Dist., Sec. 48-20s-18e. T.D. 9,700 ft.; 7-in. csg. 9,664 ft.; T. oil sd. 9,678 ft.
Gulf Oil Corp. No. 6-A Grand Prairie Lv. Dist., Sec. 17-20s-10e. Dredge canal.
Gulf Oil Corp. No. 2 State, Sec. 6-20s-19e. 9⅝-in. csg. 9,431 ft.; drlg. shly. sd. 10,252 ft.

Grand Lake—Cameron Parish

Amerada Pet. Corp. No. 1 Mallard Bay-State, Sec. 12-13s-4w. W.O. permit.
Superior Oil Co. No. 2 State, Twp. 13s-4w. Drlg. sd.&sh. 2,369 ft.

Hackberry—Cameron Parish

Gulf Oil Corp. No. 25-A Erwin, Sec. 13-12s-10w. Drk.
Stanolind O. & G. Co. No. 28-A Gulf fee, Sec. 30-12s-10w. Drlg. sh. 6,476 ft.
Superior Oil Co. No. 1 R. Vincent, Sec. 31-12s-10w. R.U.
Texas Co. No. 26 State, Twp. 12s-9w. Cg. sd. 7,833 ft.
Union Sulphur Co. No. 8 Caldwell, Sec. 37-2s-10w. T.D. 7,344 ft.; fsg.
Union Sulphur Co. No. 12 Doiron, Sec. 37-12s-10w. T.D. 8,064 ft.; P.B.; sdtrkd.; drlg. sh. 6,135 ft.
Union Sulphur Co. No. 1 Josephine O'Quinn, Sec. 37-12s-10w. T.D. 6,927 ft.; sdtrkd.; 7-in. csg. 8,014 ft.; T.S. 8,220 ft.; drlg. sh. 8,801 ft.

Horseshoe Bayou

Texas Co. No. 2 St. Mary Parish Ld. Co., Sec. 37-17s-9e. Drlg. sdy. sh.&L. 10,-750 ft.

Jefferson Island—Iberia Parish

Phillips Pet. Co. No. 1 Breaux, Sec. 41-12s-5e. Drlg. sh. 7,802 ft.
Texas Co. No. 2 State-Lake Peigneur, Twp. 12s-5w. T. salt 7,419 ft.; T.D. 7,-437 ft.; P.B. 6,292 ft.; P.B. and sidetracked; T.D. 7,964 ft., salt.

Jennings—Acadia Parish

Carter-Perrin & Brian No. 1 Valle-Arpent, Sec. 47-9s-2w.. T.D. 1,870 ft.; 6⅝-in. csg. 1,830 ft.
Gulf Oil Corp. No. 41 Arnaudet, Sec. 47-9s-2w. 9⅝-in. csg. 4,557 ft.; T.D. 7,270 ft.; I.P. 601 B.P.D.; ¼-in. ck.
Port City Oil Co. No. 24 Jennings Haywood, Sec. 41-9s-2w. T.D. 2,832 ft.; 5-in. csg. 2,832 ft.; perf. csg. 2,790-2,800 ft.; I.P. 20 B.P.D.; pmpg.
St. Mary Oil Co. No. 1 Gulf fee, Sec. 45-9s-2w. R.U.
Shell Oil Co., Inc., No. 7 Conover, Sec. 40-9s-2w. T.D. 5,161 ft.; rmg.
Stanolind O. & G. Co. No. 114 Crowley Oil & Mineral Co., Sec. 48-9s-2w. T.D. 3,755 ft.; P.B. 1,293 ft.; P.B. 1,900 ft.; sdtrkd.; T.D. 4,581 ft.; 10¾-in. csg. 4,-578 ft.; drlg. sd. 5,487 ft.
Superior Oil Co. No. 4 Moresi, Sec. 41-9s-2w. Drlg. sdy. sh. 4,050 ft.

Lafitte—Jefferson Parish

Texas Co. No. 13 Lafitte, Sec. 17-17s-24e. Drlg. sh.&sd. 5,006 ft.
Texas Co. No. 2-B Madison Realty Co., Sec. 19-17s-24e. Loc.
Texas Co. No. 2 Sch. Bd., Sec. 20-17s-24e. T.D. 6,601 ft.; sdtrkd. 6,375 ft.; went back into old hole; trying to sdtrk. at 6,387 ft.; drlg. sdy. sh. 10,-718 ft.
Texas Co. No. 2 State-Bayou Norman, Sec. 21-17s-24e. 10¾-in. csg. 1,942 ft.; T.D. 10,018 ft.; oil sd. 9,978-98 ft.; 7-in. csg. 9,955 ft.

Lake Barre—Terrebonne Parish

Texas Co. No. 43 State, Sec. 30-21s-20e. T.D. 4,122 ft.; P.B.; sdtrkd.; T.D. 5,144 ft., 5-in. csg. 4,783 ft.; rec. S.W.; abd.

Lake Hermitage—Plaquemines Parish

Gulf Oil Corp. No. 10 La Fourche Basin Levee Dist., Sec. 2-18-25e. Drlg. sd. 3,-982 ft.

Lake Long—La Fourche Parish

Fohs Oil Co. No. 8 State, Twp. 17s-19e. T.D. 9,600 ft.; P.B. 9,034 ft.; sdtrkd. at 9,034 ft.; 7-in. csg. 10,254 ft.; T.D. 10,258 ft.; perf. csg. 9,892-9,906 ft.; I.P. 118 bbl. dist. per day; 12/64-in. ck.
Fohs Oil Co. No. 9 State, 600 ft. S of No. 6 State in lake, Twp. 17s-19e. R.U.

Leeville—La Fourche Parish

Texas Co. No. 21 L.L.&E., Sec. 27-21s-22e. R.U.

Lake Mongoulois—St. Martin Parish

Texas Co. No. 7 State, Sec. 10-10s-9e. Cg. sh. 9,295 ft.

Lake Pelto—Terrebonne Parish

Texas Co. No. 25 State, Sec. 18-23s-18e. T.D. 5,750 ft.; sdtrk. 4,440 ft.; T.D. 5,081 ft.; 7-in. csg. 5,030 ft.; I.P. 648 B.P.D.; ¼-in. ck.

Lirette—Terrebonne Parish

Humble O. & R. Co. No. 1 W. E. Mont, Sec. 32-19s-19e. Loc.
Humble O. & R. Co. No. 2 La Terre Ld. Co., Sec. 32-19s-19e. Drlg. sh. 8,347 ft.
Humble O. & R. Co. No. 3 Laterre Land Co., Sec. 32-19s-19e. Loc.

New Iberia—Iberia Parish

Canal Oil Co. No. 12 Bernard, Sec. 54-12s-7e. T.D. 3,274 ft.; 7-in. csg. 3,274 ft.
Wm. Helis No. 6 Sabatier, Sec. 53-12s-2e. R.U.R.
Wm. Helis No. 7 J. E. Schwing, Sec. 56-12s-7e. Drlg. sh. 3,106 ft.
Lisbon-Iberia Oil Corp. No. 7 Gulf fee, Sec. 25-12s-7e. T.D. 5,939 ft.; P.B.; sdtrkd.; T.D. 6,081 ft.; 7-in. csg. 6,074 ft.; I.P. 362 B.P.D.; ¼-in. ck.
Texas Co. No. 2 Bryant, Sec. 25-12s-7e. R.U.
Texas Co. No. 1 Frances Compton, Sec. 71-12s-7e. T.D. 5,713 ft.; fsg.
Texas Co. No. 1 Anna B. Schwing, Sec. 71-12s-7e. Drlg. sh. 1,439 ft.

North Crowley—Acadia Parish

Humble O. & R. Co. No. 4 H. J. Habetz, Sec. 45-8s-1e. 10¾-in. csg. 2,017 ft.; T.D. 8,240 ft.; perf. csg. 8,215-18 ft.; tstd. S.W.; prep. to perf. csg. 6,723-28 ft.
Humble O. & R. Co. No. 2 Staker, Sec. 33-8s-1e. Loc.

North Tepetate—Acadia Parish

Atlantic Ref. Co. No. 5 Klumpp, Sec. 7-7s-1w. T.D. 300 ft.; run 16-in. csg.
St. Mary Oil Co. No. 1 Dr. H. Jenkins, Sec. 12-7s-2w. Drlg. sd.&sh. 4,752 ft.

Port Barre—St. Landry Parish

Pan American Prod. Co. No. 7 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 8 Cormier, Sec. 4-6s-5e. R.U.
Pan American Prod. Co. No. 3 Haas & Hirsch, Sec. 4-6s-5e. T.D. 6,932 ft.; fsg.
Smith & McDannald No. 1 S. W. Futral, Sec. 20-6s-5e. T.D. 4,841 ft., salt; P.B.; prep. to sdtrk.; T. salt 4,832 ft.; sidetracked; T.D. 4,160 ft.; stk. D.S.; sidetracked at 3,000 ft.
Y. D. Spill No. 1 Gaudet, Sec. 4-6s-5e. S.D. 4,700 ft.

Potash—Plaquemines Parish

Humble O. & R. Co. No. 39 Orleans Lve. Bd., Sec. 13-8s-15e. 16-in. csg. 244 ft.; T.D. 4,548 ft.; stuck D.S.; fsg.

Quarantine Bay—Plaquemines Parish

Gulf Oil Corp. No. 10 State QQ, Sec. 17-19s-17e. 9⅝-in. csg. 8,175 ft.; drlg. sdy. sh. 8,562 ft.
Gulf Oil Corp. No. 9 State QQ, Sec. 18-19s-17e. Loc.
Gulf Oil Corp. No. 5 State, Sec. 17-19s-17e. Loc.

Raceland—La Fourche Parish

Amerada Pet. Corp. No. 1 Godchaux Sugars, Inc., Sec. 34-15s-19e. 18⅝-in. 11,312 ft.; T.A.
Tide Water Asso. Oil Co. No. 2-A South

Coast Corp., Sec. 34-15s-19e. 10,461 ft. 5¼-in. csg. 10,253 ft.; perf. csg. 10,120-138 ft.; csg. began to leak; cmtd.; P.B. 9,300 ft.

Sorrento—Ascension Parish

Pan American Prod. Co. No. 16 United Ld. Co., Sec. 15-10s-4e. Drlg. sd. 1,472 ft.

Scrrento Synd. No. 1 L. L. Bernard, Sec. 27-10s-4e. R.U.

South Houma—Terrebonne Parish

Shell Pet. Corp. No. 3 Peters. T.D. 10,316 ft. oil sd.; make D.S.T.; rec. 1 stand 36.7-gr. oil; 1 jt. oily mud; D.S.T. 10,151-60 ft.; 5½-in. csg. 10,302 ft.

South Roanoke—Jeff Davis Parish

Continental Oil Co. No. 1 Calcasieu Natl. Bnk., Sec. 36-10s-4w. T.D. 9,684 ft.; cutting D.P.

Starks—Calcasieu Parish

Skelly Oil Co. No. 1 Industrial Lbr. Co., Sec. 20-9s-12w. Drlg. sh. 752 ft.

Valencia—La Fourche Parish

T. G. Markley and Mohawk Oil Corp. No. 1 Deusson Hrs., Sec. 100-17s-20e. T.D. 6,905 ft.; sdtrkd.; T.D. 6,825 ft.; fsg.

Pan American Prod. Co. No. 20 Harang, Sec. 8-17s-20e. T.D. 4,608 ft.; sdtrk.; drlg. sh. 4,876 ft.

Venice—Plaquemines Parish

Tide Water Asso. Oil Co. No. 5 Buras Lv. Bd., Sec. 23-21s-30e. Drlg. sh. 8,-397 ft.

Tide Water Asso. Oil Co. No. 10 Manhattan Ld. & Fruit Co., Sec. 26-21s-30e. S.D. 290 ft.

Villa Platte—Evangeline Parish

Continental Oil Co. No. 1 Attales, Sec. 45-3s-2e. Drk.

Continental Oil Co. No. 3 Ludeau-Haas, Sec. 44-3s-2e. T.D. 9,073 ft.; I.P. 367 B.P.D.; ⅛-in. ck.

Continental Oil Co. No. 2 Opelousas, Sec. 44-3s-2e. Drlg. sh. 8,243 ft.

Continental Oil Co. No. 2 Orise Deville, Sec. 46-3s-2e. T.D. 9,060 ft.; rng. csg.

Continental Oil Co. No. 3 Orise Deville, Sec. 46-3s-2e. Drlg. sh. 1,236 ft.

Continental Oil Co. No. 1 J. E. Vidrine, Sec. 47-3s-2e. T.D. 10,506 ft.; sdtrkd.; T.D. 10,507 ft.; perf. csg. 10,360-80 ft.; tstd. mud; perf. csg. 10,350-60 ft.; rec. salty mud.

Continental Oil Co. No. 2 Vidrine, Sec. 34-3s-2e. Drlg. sh. 8,952 ft.

Texas Co. No. 2 Marman fee, Sec. 45-3s-2e. T.D. 9,047 ft.; P.B. 9,028 ft.; I.P. 40 B.O., 25 bbl. S.W.; 12/64-in. ck.

Vinton—Calcasieu Parish

N. D. Mayfield et al No. 1 Lyons, Sec. 33-10s-12e. T.D. 4,247 ft.; abd.

R. & R. Oil Co. No. 2 Vincent, Sec. 34-10s-12w. T.D. 2,343 ft.; run 7-in. csg.; no report.

Welsh—Jeff Davis Parish

C. W. Buckley et al No. 1 Calcasieu Natl. Bnk., Sec. 34-9s-5w. R.U.R.

West Gueydan—Vermilion Parish

Magnolia Pet. Co. No. 2 J. B. Ferguson, Sec. 5-12s-2w. R.U.R.

West Lake Verret—St. Mary Parish

Shell Oil Co., Inc., No. 3 Jeanerette Lbr. Co. 10¾-in. csg. 2,493 ft.; cg. sh. 7,-620 ft.

Woodlawn—Jeff Davis Parish

Union Sulphur Co. No. 5 Calcasieu Natl. Bnk., Sec. 12-9s-6w. Drlg. sh. 8,204 ft.

Union Sulphur Co. No. 1 Raymond Hebert, Sec. 6-9s-5w. Drlg. sh. 1,569 ft.

Union Sulphur Co. No. 1 M. F. Johnson, Sec. 12-9s-6w. Drlg. sd. 8,770 ft.

Union Sulphur Co. No. 3 Mrs. O'Miller, Sec. 7-9s-5w. Drk.

S. LOUISIANA WILDCATS

Acadia Parish

Tri Parish Drillers, Inc., No. 1 Paul Stag, Sec. 4-7s-1w. M.I. rig.

Allen Parish

Bel Oil Corp. No. 1 J. A. Bel, Sec. 22-6s-3w. Cd. gas sd. 6,257-87 ft.; S.W. sd. 6,287-97 ft.; T.D. 9,010 ft.; run 7-in. csg. 8,595 ft.; perf. csg. 8,549-52 ft.; tstd. 40 lb. pres.; rec. 18 stands S.W.; drlg. mud cut with gas and dist.; perf. csg. 6,917-19 ft.; tstd. S.W.; P.B. 6,004 ft.; perf. csg. 6,041-50 ft.; rec. 3 stands oil, 15 stands of oil and gas-cut mud showing S.W.; sqzd. perf.; perf csg. 6,025-36 ft.; tstd. 600 lb. pres.; rec. 4 stands drlg. mud, slight trace of dist.; sqzd. perf.; perf. csg. 6,040-50 ft.; tstd. 25 lb. pres.; dropped to 0; rec. 11 stands of fresh wtr.; 8 stands mud and sd., slightly salty; perf. csg. 7,272-92 ft.; well freezing up; prep. to run bttm.-hole ck.

Assumption Parish

Shell Oil Co. No. 1 Ellis, Sec. 66-16s-14e. Drlg. sh. 9,100 ft.; no report.

Avoyelles Parish

G. C Koch et al No. 1 Purdy Hess Lbr. Co., Sec. 25-2n-3e. O.W.D.D.; T.D. 6,-054 ft.; M.I.R.

Beauregard Parish

Atlantic Ref. Co. No. 1 Lutcher Moore, Sec. 22-3s-11w. Loc.

Atlantic Ref. Co. No. 1 Rice Ld. & Lbr. Co., Sec. 22-3s-11w. Loc.

Atlantic Ref. Co. No. 1-A Rice Ld. & Lbr. Co., Sec. 22-3s-11w. T. Cook Mtn. 6,628 ft.; drlg. sd.&sh. 8,350 ft.

Standard Oil Co. of Calif. No. 1 Long Bell Lbr. Co., Sec. 23-4s-9w. T. Cckfld. 6,949 ft.; 9⅝-in. csg. 7,830 ft.; cd. top Wlx. sd. 9,630 ft.; T.D. 10,573 ft.; S.D.

Calcasieu Parish

Humble O. & R. Co. No. 1 Edgewood Ld. & Logging Co., Sec. 32-7s-10w. Drlg. sdy. sh. 6,242 ft.

Union Sulphur Co. No. 2 Drew Manuel Training Sch., Sec. 17-10s-11w. Drlg. sh. 7,608 ft.

Evangeline Parish

Continental Oil Co. et al No. 1 Mrs. Lillie Manuel, Sec. 33-4s-1w. T. Vicksburg 7,740 ft.; drlg. sh. 10,860 ft.

Iberia Parish

Texas Co. No. 3-B State-Vermilion Bay, Twp. 16s-5e. T. salt 5,970 ft.; B. salt 7,540 ft.; 9⅝-in. csg. 7,705 ft.; drlg. sh. 9,834 ft.

Iberville Parish

Housh & Thompson No. 1 Kessler & Folse, Sec. 40-11s-13e. T.D. 9,165 ft.; fsg.; sdtrkd.; drld. to 8,929 ft.; stk. D.S.

Humble O. & R. Co. No. 1-B A. Wilberts Lbr. & Shingle Co., Sec. 78-8s-8e. M. I.R.

Shell Oil Co., Inc., No. 1 Natalbany Lbr. Co., Sec. 18-9s-2e (tight well). T.D. 10,-524 ft.; P.B. 9,100 ft.; perf. csg. 9,060-65 ft.; made sqz. job; perf. csg. 9,035-56 ft.; rec. 23 stands oil and S.W.; P.B. 9,057 ft.; S.D.

Jeff Davis Parish

R. M. Bleakie et al No. 1 Lack-Moore Co., Ltd., Sec. 29-7s-6w. 13⅜-in. csg. 65 ft.; 9⅝-in. csg. 1,123 ft.; drlg. sh. 4,612 ft.

Stanolind O. & G. Co. No. 3-B Ervin & Bishop, Lot 15, Sec. 7-9s-5w. Drlg. sh. 2,656 ft.

Union Sulphur Co. No. 1 H. B. Tietje, Sec. 36-7s-4w. T.D. 9,220 ft.; 7-in. csg. 8,227 ft.; perf. csg. 8,051-65 ft.; swbd. S.W.; pulling screen and lnr.; P.B. 7,-648 ft.; perf. csg. 7,632-46 ft.; showing S.W. and oil; P.B. 7,639 ft.; perf. csg. 7,628-38 ft.; failed to flw.; prep. to reperf. csg.

Union Sulphur Co. No. 2 H. B. Tietje, Sec. 36-2s-4w. Drk.

La Fourche Parish

Gulf Oil Corp. No. 1 Grandison Ld. Co., Sec. 14-20s-23e. T.D. 8,241 ft.; 9⅝-in. csg. 8,241 ft.; T.D. 12,013 ft.; abd.

J. Perry Scranton No. 2 Martinez, Sec. 132-15s-17e. Drlg. sdy. sh. 7,764 ft.

Texas Co. No. 1 L.L.&E. Golden Meadows, Sec. 77-19s-21e. 9⅝-in. csg. 10,-744 ft.; T.D. 12,526 ft.; P.B. 11,810 ft.; made sqze. job; perf. csg. 10,769-71 ft.; tstd. S.W.; P.B. 10,269 ft.; stk. D.S.; drlg. on junk; perf. csg. 8,975-90 ft.; tstd. dry gas, 2,750 lb. W.P.; perf. csg. 7,300-20 ft., rec. drlg. mud; perf. csg. 4,400-30 ft.; tstd. dry gas; sqzd. perf.; W.O.C.

Tide Water Asso. Oil Co. No. 1 Delta Farms, Inc., Sec. 6-17s-23e. Loc.

Livingston Parish

Fowler & Tower No. 1 Ellis Hood, Sec. 37-7s-3e. Loc.

Orleans Parish

W. T. Burton No. 3-B Faubourg de Montluzin, Sec. 1-11s-13e. Drlg. sh. 6,030 ft.

W. T. Buton No. 1 L.&N.R.R., Sec. 18-11s-15e. T.D. 9,000 ft.; 7⅝-in. csg. 8,-820 ft.; T.D. 10,138 ft.; well tried to blow out; set retainer; drlg. L. 9,400 ft., in new hole.

W. T. Burton No. 3 L.&N.R.R., Sec. 25-11s-14e. Loc.

W. T. Burton No. 2 State-Lake Pontchartrain, Twp. 10s-10e. Loc.

Plaquemines Parish

Gulf Oil Corp. No. 8 State P.P., Sec. 18-23s-31e. Loc.

St. Bernard Parish

Carter, Molero & Brian, Sec. 129-14s-14e. Drk.

Gulf Ref. Co. No. 4-State-R.R. (Lake Borgne), Twp. 12s-15e. 9⅝-in. csg. 8,-161 ft.; T.D. 10,632 ft.; P.B. 9,700 ft.; rmd. to 9,658 ft.; lost core bbl.; P.B. sdtrkd. 8,912 ft.; T.D. 10,528 ft.; 7-in. csg. 10,494 ft.; fsg.

Vendome Pet. Co. No. 2 Kenilworth Plantation, Sec. 59-13s-14e. Drlg. sh. 9,866 ft.

St. Charles Parish

Texas Co. No. 1 L.L.&E. Paradis, Sec. 39-14s-20e. 9⅝-in. csg. 8,975 ft.; T.D. 10,787 ft.; twisted off D.S.; fsg.; C.O. hole 10,200 ft.; 7-in. csg. 10,177 ft.; perf. csg. 10,060-70 ft.; tstd. gas; sqzd. perf.; perf. csg. 9,840-50 ft.; tstd. 2,000 lb. press.; flwd. est. 5 bbl. dist. per hr.; perf. csg. 9,608-20 ft.; tstd. 2,800 lb. pres.; flwd. 8 to 10 bbl. dist. per hr.; prep. to P.B. 9,503 ft.; perf. csg. 9,485-9,503 ft.; flwd. 6 bbl. 40-gr. dist. per hr.; ¼-in. ck. on D.S.T.; 2,600 lb. pres.; sqzd. off perf.; perf. csg. 8,895-8,730 ft.; flowed ⅛ bbl. dist. per hr.; ¼-in. choke; 3,000 lb. W.P.; will drill out and comp. at 9,815-9,915 ft.

St. Landry Parish

Deep Rock Oil Co. No. 1 B. Babineaux, Sec. 39-8s-4e. Drlg. sd.&sh. 7,830 ft.

St. Martin Parish

Texas Co. No. 12 St. Martin, Sec. 21-8s-7e. Drlg. gvl. 575 ft.

St. Mary Parish

Acadian Prod. Co. No. 1 Robichaux, Sec. 27-13s-9e. T.D. 2,165 ft.; pulled in drk.

Perry S. Cooney No. 1 A. W. Allain, Sec. 46-13s-9e. S.D. 2,600 ft.

St. Tammany Parish

Honey Island Dev. Corp. No. 1 W. C. Forbes, Sec. 33-7s-15e. T.D. 100 ft.; 20-in. csg. 87 ft.

Terrebonne Parish

Texas Co. No. 2 State-Coon Point, Twp. 23s-14e. 13⅜-in. csg. 1,900 ft.; T.D. 6,-716 ft.; abd.

Vermilion Parish

La. Ld. & Expln. Co. No. 1 La. Fur. Co., Sec. 21-15s-1e. Drlg. sh.&L. 9,349 ft.

Vernon Parish

W. T. Burton No. 1 W. T. Burton Mineral fee, Sec. 32-1n-6w. Drlg. sh. 6,-170 ft.

Nat Hunter et al No. 1 W. T. Burton fee, Sec. 13-2n-5w. Drk.

West Feliciana Parish

McKay et al No. 1 James Montgomery. Loc.

TEXAS

Week Ending June 24

GULF COAST FIELDS

Old Ocean—Brazoria County

Harrison & Abercrombie No. 2 Larsen et al, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; cg. sh. 10,450 ft.

Harrison & Abercrombie No. 1 C. W. Markle, Polly & Chance Sur. 9⅝-in. csg. 7,016 ft.; T.D. 11,079 ft.; P.B. to sdtrk.

Harrison & Abercrombie No. 2 Osburn, C. Breen Sur. 9⅝-in. csg. 7,000 ft.; drlg. sd.&sh. 9,436 ft.

Mid-Continent Pet. Corp. No. 1 Wm. Chenault, C. Breen Sur. Drlg. 6,736 ft.

Sun Oil Co. No. 1 Borsodi Elkins, C. Breen Sur. 18⅝-in. csg. 121 ft.; 9⅝-in. csg. 7,010 ft.; T.D. 10,615 ft.; 7-in. csg. on bttm.; tstg.

Sun Oil Co. No. 3 Campbell, C. Breen Sur. Loc.

Cedar Point—Chambers County

Standard Oil Co. of Calif. et al No. 46-120 State. 10¾-in. csg. 1,610 ft.; T.D. 6,575 ft.; abd.

Standard of Texas et al No. 13-117 State. M.I.R.

Seabreeze—Chambers County

Sun Oil Co. No. 2 Hoffman, T.&N.O. Sur. No. 131. R.U.

West Columbia—Brazoria County

Texas Co. No. 33 Abrams, G. Tennille Sur. Drlg. sh. 1,050 ft.

Thompson—Fort Bend County

H. M. Naylor No. 3 Musselman, H. Chrisman Sur. Spd.

H. M. Naylor No. 4 Musselman, H. Chrisman Sur. T.D. 7,801 ft.; run csg.

H. M. Naylor No. 1 M. W. Shanks, Horatio Chrisman Sur. Spd.

H. M. Naylor No. 5 Musselman, H. Chrisman Sur. Bldg. rd.

Caplen—Galveston County

Sun Oil Co. No. 1 Zinn & Forman, S. F. Hughes Sur. Loc.

Dickinson—Galveston County

Pure Oil Co. No. 1 Franz Kohfeldt et al, T. W. Johnson Sur. T.D. 8,706 ft.; 5½-in. csg. 8,505 ft.; perf. csg. 8,495-8,505 ft.; flwd. 82 bbl. dist. per day; 12/64-in. ck.

League City—Galveston County

Phillips Pet. Co. No. 1 Bryan, Perry & Austin Sur. R.U.&S.D.

Phillips Pet. Co. No. 1 Esperson-Phillips, S. F. Austin Sur. Cg. 9,031 ft.

Phillips Pet. Co. No. 5 Bertha Lobit Wilson, Perry & Austin Sur. 10¾-in. csg. 2,541 ft.; drlg. sh. 4,760 ft.

Phillips Pet. Co. No. 3 Lobit Wilson, Perry & Austin Sur. Drlg. sh. 6,710 ft.

Phillips Pet. Co. No. 4 Lobit, Perry & Austin Sur. Cg. sh. 9,227 ft.

Phillips Pet. Co. No. 2 Stewart Title Co., S. F. Austin Sur. T.D. 9,270 ft.; 7-in. csg. 9,180 ft.; perf. csg. 8,954-59 ft.

West Prod. Co. No. 1 fee, Lot 2, Blk. 5, Perry & Austin Sur. Loc.

Aldine—Harris County

Earl Hankamer No. 1 W. B. Rowland, Lots 42 and 43, E. Farias Sur. T.D. 7,284 ft.; 5½-in. csg. on bottom; perf. csg. 7,165-70 ft.; flwg. dist.; 5/64-in. ck.

Clear Lake—Harris County

Humble O. & R. Co. No. 9-C Humble-West, Wm. Dobie Sur. Drlg. sh. 1,-256 ft.

Clinton—Harris County

Stanolind O. & G. Co. No. 2 Angelo Cande Lari Reels & Trobough Sur. Drlg. sh. 3,512 ft.

Stanolind O. & G. Co. No. 2 Edwards, Reels & Trobough Sur. Drk.

Eureka—Harris County

Jack Frazier No. 1 W. T. Helberg, H. Reinerman Sur. R.U.

M. G. Hansbro No. 1 Beail, H. Reinerman Sur. T.D. 8,256 ft.; abd.

Houston Oil Co. No. 3 Helberg & Lackner, J. Reinerman Sur. Loc.

Means & McGehee No. 1-F Laura Lackner. T.D. 7,735 ft.; perf. csg. 7,113-18 ft.; tstg.

Tide Water Asso. Oil Co. No. 2-B Lackner, H. Reinerman Sur. T.D. 8,090 ft.; perf. csg. 8,040-50 ft.; sqzd. perf.; W. O.C.

Fairbanks—Harris County

Kirby Pet. Co. et al No. 1 Hillebrenner, T. M. Dorsett Sur. 9⅝-in. csg. 1,300 ft.; cg. 6,760 ft.

Union Prod. Co. No. 1 C. H. Daniel, S. S. Reynolds Sur. 10¾-in. csg. 1,479 ft.

Friendswood—Harris County

Humble O. & R. Co. No. 21-B Humble-West, A. Whitlock Sur. Cg. sd. 6,055 ft.

Humble O. & R. Co. No. 25-B Humble-West, Luke Hemenway Sur. T.D. 6,-042 ft.; tstg.

Humble O. & R. Co. No. 12 West, T. Choate Sur. T.S. 5,531 ft.; T.D. 6,044 ft.

South Houston—Harris County

Commerce Oil Co. No. 1 O. R. Staiti, Callahan & Vince Sur. 10¾-in. csg. 1,-516 ft.

Francitas—Jackson County

Crosby Drlg. Co. No. 1 Hale & Allee, Green Sur. Drlg. sh. 4,836 ft.

Cheek—Jefferson County

Humble O. & R. Co. No. 6 Broussard, M. Grange Sur. Loc.

Humble O. & R. Co. No. 1-B Steinhagen, Wm. Carr Sur. T.D. 7,927 ft.; 7-in. csg. 7,912 ft.; flwd. 2 bbl. dist. per hr.; ¼-in. ck.; cg. 7,952 ft.

Clam Lake—Jefferson County

Shell Oil Co., Inc., No. 3 McFaddin, McFaddin Sur. T.D. 4,001 ft.; P.B. 3,675 ft.

La Belle—Jefferson County

Sun Oil Co. No. 5 Broussard-Hebert, T. &N.O. Sur. No. 207. 18⅝-in. csg. 130 ft.; T.D. 7,650 ft.; cmtd. 9⅝-in. csg. on drlg. out cmt.

Esperson—Liberty County

General Crude Oil Co. No. 3-B Esperson, A. McNeil Sur. Cg. sh. 7,330 ft.

Hardin—Liberty County

Gulf Oil Corp. No. 4 Cessna, H. B. Johnston Sur. R.U.

North Markham—Matagorda County

Ohio Oil Co. No. 2 Carlson, I.&G.N. Sur. No. 2, 10¾-in. csg. 1,472 ft.; drlg. sh. 5,226 ft.

Conroe Field—Montgomery County

E. I. Thompson, Tr., No. 1 W. D. Granger, T.&N.O. Sur. No. 14 (Wilcox test SE edge of prod.). 16-in. csg. 82 ft.; 10¾-in. csg. 1,800 ft.; drlg. sh. 8,260 ft.

Orange—Orange County

Gulf Oil Co. No. 10-A Winfree, Wm. Dyson Sur. Drlg. sh.&L. 2,626 ft.

John Mayo No. 1 M. J. Williams, Dyson Sur. R.U.

Ace—Polk County

Dick Schwab No. 1-C Kirby-West Lbr. Co., G. A. Thomas Sur. Loc.

Shell Pet. Corp. No. 2 Doucett, P. A. Sublett Sur. Loc.

Segno—Polk County

Gulf Oil Corp. No. 4 Quinn, A. Morales Sur. R.U.

Gulf Oil Corp. No. 1 Ragan, I.&G.N. Sur. No. 15. R.U.

Gulf Oil Corp. No. 17 Wing, I.&G.N. Sur. No. 14. Drlg. sh.&L. 7,573 ft.

Gulf Oil Corp. No. 19 Wing, I.&G.N. Sur. No. 14. Drlg. sh. 7,859 ft.

Humble O. & R. Co. No. 13-B Kirby Lbr. Co., P. Garcia Sur. Bldg. rd.

Humble O. & R. Co. No. 14-B Kirby Lbr. Co., M. Victor Sur. Drlg. sh. 6,475 ft.

Orange—Port Neches

Texas Co. No. 15 Kuhn, A. E. Hall Sur. R.U.

Texas Co. No. 7 W. H. Stark, M. E. Hall Sur. T.D. 5,945 ft.; 7-in. csg. 5,930 ft.; comp.; no ga.

Spurger—Tyler County

Republic Prod. Co No. 21 fee, N. Hurd Lge. 9⅝-in. csg. 1,807 ft.; drlg. sh. 7,363 ft.

Republic Prod. Co. No. 22 fee, N. Hurd Lge. Drlg. sh. 5,031 ft.

GULF COAST WILDCATS

Brazoria County

Crosby Drlg. Co. No. 1 H. A. Paine, A. G. Reynolds Sur. R.U.

Fabriguze et al No. 1 Freeport Sulphur, Stephen F. Austin Sur. (Byran Mound). M.I.M.
Hamman Expltn. Co. No. 1 Darrington, Achilles McFarland Sur. 10¾-in. csg. 1,200 ft.; 7-in. csg. 8,887 ft.; T.D. 8,917 ft.; P.B. 8,490 ft.; sdtrkd.; drlg. sh. 8,250 ft.
Hamman Expltn. Co. No. 2 Darrington, State Prison Farm, F. Bingham Sur. W.O. rig.
Glenn McCarthy No. 1 J. C. Carr, J. D. Valderas Sur. Bldg. road.
Glenn McCarthy No. 1 Houston Farm Dev., James F. Perry and E. Austin Sur. No. 7. T.D. 8,700 ft.; D.S. stk.
Rowan Drlg. Co. No. 1 Vilren, J. S. Talmage Sur., Sec. 68. Loc.
Smith & McDannald No. 1 Slocum, Henry Austin Sur. Drlg. sdy. L. 6,932 ft.

Chambers County

Geo. Anderson No. 1 Julia Casey, W. D. Smith Sur. Loc.
Plymouth Oil Co. No. 1 Wilburn, Wm. H. Moore Sur. 10¾-in. csg. 1,994 ft. drlg. sh. 6,786 ft.
L. D. Roberts No. 1 C. H. Lanz, T.&N. O. Sur. No. 35. R.U.

Colorado County

J. S. Farbriguze et al No. 1 J. R. Frazar, J. Earle Sur. Drlg. sh. 5,810 ft.
Cockburn Oil Corp. No. 1 R. W. Ferrs, H. Chrisman Sur. Loc.

Fort Bend County

O. J. Martin et al No. 1 W. B. Blakely, J. Frederick Sur. R.U.
Superior Oil Co. No. 1 Shirle Beard et al, H.&T.C. Sur. No. 111. 10¾-in. csg. 1,230 ft.; cg. sh. 7,115 ft.
Woodland Oil Co. No. 1 Herietta Berg et al, H.&T.C. Sur., Sec. 25. T.D. 7,-015 ft.; rmg.

Galveston County

Sun Oil Co. No. 1 State, East Galveston Bay. Drk.

Hardin County

Geo. Echols No. 1 Merchant Est., Stephen Jackson Lge. (E. flank Sour Lake field). Loc.
Norcoff Corp. No. 1 Caswell, B.B.B.&C. Sur. No. 72 (E flank Saratoga dome). T.D. 4,900 ft.; fsg.

Harris County

Housh & Thompson et al No. 1 J. L. Krey, B. Herra Sur. 10¾-in. csg. 759 ft.; W.O.C.
J. H. Woodard, Jr., No. 1 Miller Est., John Skorupski Sur. S.D. 5,133 ft.

Jackson County

L. Glasscock No. 1 J. H. Drummond, R. Musquiz Sur. T.D. 5,543 ft.; 7-in. csg. 5,528 ft.; flwd. 55 bbl. P.L.O.; 16 hr.; ½-in. ck.
J. Mayo et al No. 1 J. H. Tucker, R. Musquiz Sur. 10¾-in. csg. 593 ft.
Moore & Ahern No. 1 Victoria Ld. & Loan Co., P. Scott Sur. Loc.
T. C. Young and Whitman Drlg. Co. No. 1 R. J. Stephens, R. Musquiz Sur. T.D. 6,016 ft.; abd.

Jasper County

Bob Milner et al No. 1 Cartwright, E. O. LeGrande Sur. R.U.

Jefferson County

I. E. Harwell No. 1 State, Gulf of Mexico. T.D. 5,840 ft.; D.S. stk.; pulled in two; S.D.
Hebert & Smith et al No. 1 L. D. Fontenot, Sec. 17, H.T.&B. Sur. T.D. 8,755 ft.; 5½-in. csg. 8,007 ft.; oil sds. 7,906-20 ft., 7,870-06 ft., 6,730 ft.; perf. csg. 7,875-85 ft.; rec. 17 thrib. oil; D.S.T.; run tbg.
Humble O. & R. Co. No. 15-B McFaddin Beach State, Gulf of Mexico, 660 ft. NW of No. 13-B. Drlg. sh. 5,160 ft.

Liberty County

Stanolind O. & G. Co. No. 1 E. M. Flowers. I.&G.N.R.R. Sur. 10¾-in. csg. 1,-588 ft.; T.D. 9,109 ft.; perf. csg. 8,700-05 ft.; tstg.

Matagorda County

Continental Oil Co. No. 1 Savage, Daniel Yeamans Sur. T. sd. 3,842 ft.; well blew out; killed; T.D. 5,810 ft.; P.B. 4,195 ft.; perf. csg. 4,132-42 ft.; tstd. dry gas.

Polk County

Jack Frazier et al No. 2 Bergman, A. Viesca Sur. Drlg. sh. 510 ft.

S. W. TEXAS WILDCATS

Bee County

Dirks Bros. No. 1 Page, Thos. K. Pilkington Sur. T.D. 4,120 ft.; abd.

Bell County

M. M. Gordon No. 1 Steele, Oliver T. Tyler Sur. S.D. 1,201 ft.
G. P. Shelton et al No. 1 Nelson, Michael Griffin Sur. S.D. 1,208 ft.

Bexar County

E. D. Harris No. 1 Schroeder, Luke Bust Sur. No. 37. Drlg. 175 ft.

Blanco County

H. C. McCart No. 1 Geo. Lester, Newton Carson Sur. No. 34. Drlg. L. 410 ft.

Brooks County

Magnolia Pet. Co. No. 2 Denman, Jose Marcelo Hinojosa gr. Cg. sd. 4,885 ft.

Cameron County

Salviejo and Pure Oil Co. No. 1 Gatewood and Dewberry, San Martin gr. Drlg. sh. 7,123 ft.

Duval County

W. L. Catlin et al No. 1 Louis Escapule, J. Poitevent Sur. No. 73. Loc.
Wm. Nichols et al No. 1 Tom Graham, Cuadrilla Irrg. Sur., Sec. 572. T.D. 4,-800 ft.; rec. 630 ft. P.L.O.; D.S.T. 4,-782-98 ft.; 5½-in. csg. on bttm.; reperf. csg. 4,784-90 ft.; flwg. small amt. of oil; tstg.
Rowe & Scheig No. 1 Well, B.S.&F. Survey No. 567. T.D. 2,710 ft.; abd.
W. A. Wagner No. 1 D. J. Welikel, John H. Gibson Sur. No. 497. R.U. and S.D.
R. L. Wheelock No. 1 Serner, Sec. 290. T.D. 4,808 ft.; 5½-in. csg. 4,669 ft.

Edwards County

O. L. Alderfer and C. W. Davis No. 1 J. A. Earwood, C.C.S.D.&R.G.N.G.R.R. Sur., Sec. 158. S.D. 125 ft.
O. C. Reynolds et al No. 1 Paul Turney, C.C.S.D.&R.G.N.G. Sur., Sec. 164. Drlg. L. 60 ft.; no report.

Frio County

Wilcox O. & G. Co. No. 1 R. H. Harris, Hooper & Wade Sur. No. 3. R.U.

Goliad County

Cron & Gracey et al No. 1 O. G. Drier, B.S.&F. Sur. No. 7. Set 1,320 ft. of 7-in. lnr. at 5,190 ft.; T.D. 5,885 ft.; set 812 ft. of 5-in. lnr.; perf. 5,566-70 ft.; tstd. S.W.; W.O.; perf. csg. 5,866-70 ft.; tstd. S.W.; to reperf. csg. 5,767-70 ft.; tstd. S.W.

Guadalupe County

Burton, Garvin & Womack No. 1 Henry Weil, E. De los Santos Coy Sur. No. 93. L. O.S. 200-10 ft.; 6-in. csg. 210 ft. acd.; cmt. failed to hold; recmtd.; swbg. 5 B.O.P.D.; prep. to D.D.; S.D. 400 ft.
C. L. Felty No. 1 Warneke, Vicente Duran Sur. No. 4. Drlg. 1,006 ft.
Great Southern Oil Co. No. 1 Goodson, John Tom Sur. Drlg. sh. 1,430 ft.
John Hueners No. 1 Boecker, John Baker Sur. No. 26. S.D. 1,013 ft.

Hidalgo County

Shary Maddox No. 1 A. C. Neal, Santa Anita gr. Drlg. 6,412 ft.
Pantano Pet. Co. No. 1 R. E. Harding, La Mestena Rnh. subd. (La Blanca field). Drlg. 7,267 ft.
Wheelock & Smith No. 1 Yturria Town & Imp. Co., Anastacio Villareal Por. No. 43. Cg. sh. 4,312 ft.

Jim Hogg County

Imperial Oil Co. No. 1 Jose M. Gutierrez, H. Rodriquez Sur. No. 142. 10-in. csg. 40 ft.
Johnson & Robinson No. 1 Palacios, Mary Montgomery Sur. T.D. 3,519 ft.; 5½-in. csg. 2,900 ft.
Magnolia Pet. Co. No. 1 Ysaquirre et al, "Agua Nueva de Abajo," J. M. Ramirez Sur. M.I.R.
Phillips Drlg. Co. No. 1 Allen, H.&G.N. Sur. No. 21. Cg. S.W. sd. 3,391 ft.; no report.

Jim Wells County

Bridwell Oil Co. No. 1 Beasley La. Trinidad gr. T.D. 5,269 ft.; run csg.; sd. 5,215-60 ft.
Gorman & Yoakam No. 1 J. A. Schmidt, Casa Blanca gr. Loc.
Tom Graham No. 1 Mull Hrs. of Geo. W. Main No. 30 (Camada field). T.D. 7,014 ft.; abd.
H. H. Howell No. 1 W. K. Hoffman, Lavaca gr. T.D. 7,025 ft.; 5½-in. csg. 7,-035 ft.; perf. csg. 6,860-66 ft.; swb. S.W.; P.B.; perf. csg. 5,818-28 ft.; rec. mud, oil and S.W.; reperf. csg. 5,535-40 ft.; I.P. 1½ bbl. dist. per day; ⅛-in. ck.
H. H. Howell No. 1 Lindsay & Reed, Teresa Bustillos Sur. Drlg. sh. 1,988 ft.
Magnolia Pet. Co. No. 1 J. O. Maun, Lot 6, Blk. 11. Cg. sh. 6,365 ft.
Pettus O. & R. Co. No. 1 R. Y. Garcia, S.A.&M.G. Sur. Cg. sh. 4,385 ft.
W. R. Quinn et al No. 1 D. M. and Fritz Pundt, T. C. Wright Sur. S.D. 4,770 ft.; 7-in. csg. 4,770 ft.; T.D. 5,415 ft.; P.B.
Randon Oil Co. et al No. 1 Tulley, W. A. O. Wadsworth Sur. T.D. 6,835 ft.; abd.
Reese & Dunn et al No. 1 Smith, La. Trinidad gr. Cd. O.S. 5,237-86 ft.; T. D. 5,358 ft.; perf. csg. 5,240-46 ft.; I.P. 150 B.P.D.; ⅛-in. ck.
Smith & Storey No. 1 Shaeffer, Stanley Welch Sur. No. 90. S.D. 2,635 ft.
Texas Gulf Prod. Co. No. 1 E. E. Miller, Benito Lopez De Jaen Sur. 5½-min. D.S.T. 5,093-5,101 ft.; 350 lb. pres.; cd. O.S. 5,150-55 ft.; D.S.T. rec. 1,000 ft. 38-gr. oil, 1,000 lb. W.P.; T.D. 5,613 ft.; T. sd. 5,143 ft.; flwg. est. 8 B.O. P.D.; 7/64-in. ck.

Karnes County

Paul Meador No. 1 Ruhman, J. Richardson Sur. Drk.

Kendall County

C. M. Dewey No. 2 Seidensticker, R. Davis Sur. No. 20. S.D. 714 ft.

Kenedy County

Humble O. & R. Co. No. 3 Kenedy rnh.-X, Salinas Sur. Drlg. sh. 7,436 ft.

Kimble County

W. S. Kelly No. 1 A. L. Bierchwale, D. Lloyd Sur. S.D. 95 ft.

La Salle County

Eugene Garner No. 4 Yeager, John H. Gibson Sur. No. 37. R.U.

Lavaca County

W. L. Goldston No. 1 Turk, Edwards Sur. Bldg. drk.

Lee County

Fred Pederson et al No. 1 Brown, David Hudson Sur. Pmpd. 100 B.F.; 36 hrs.; 3 bbl. oily emulsion; cd. L. 6,461-90 ft.; swbg. S.W.

Live Oak County

R. G. Pattillo No. 1 H. D. Miller, Willis Darby Sur. No. 4. R.U.
Rupert P. Ricker No. 1 fee, Wm. O'Docherty Sur. No. 9. Cg. sdy. sh. 1,718 ft.
L. W. Stieren No. 3 Lange, Thos. Adams Sur. T.D. 1,497 ft.

McMullen County

Gilcrease Oil Co. No. 1 Shiner, Jose Aldrete Sur. No. 14. Drlg. sd. 1,903 ft.
F. H. Golhke No. 1 E. L. Miles, J. Poitevant Sur. Spd.
Gordon Grffin No. 1 Dilworth, R. A. Moore Sur. R.U.
R. P. Ricker et al No. 1 La Chusa Ld. Co., Jugo Nadler Sur. 52. T.D. 2,010 ft.; abd.
C. D. Scarborough and Bigiane No. 1 Paul Foyt, James Garner Sur. No. 6. 7-in. csg. 1,251 ft.; T.D. 1,265 ft.; abd.

Medina County

Victor Ziegler No. 1 Paul Haby, Wm. G. Still Sur. No. 1. S.D. 1,000 ft.

Milam County

H. R. Edwards et al No. 2 Camp. D Robertson Sur. 5½-in. csg. 1,873 ft.; T.D. 1,910 ft.; abd.

Nueces County

E. A. Graham et al No. 1 Sam Taylor, D. M. Oliver Sur., Sec. 465. Drlg. sdy. sh. 3,873 ft.
Mills Bennett Prod. Co. No. 1 Poenisch, E. Villareal Sur. T.D. 850 ft.; run csg.
Shield Oil Co. No. 1 Magee, Blk. 10, Driscoll ranch, Geo. Paul subd. 10¾-in. csg. 650 ft.
Texas Conservative Oil Co. No. 1 Bruno Bock, Sec. 44, Geo. H. Pauls subd., Driscoll ranch. Loc.
Texas Conservative Oil Co. No. 1-B Bock, Geo. H. Pauls subd. of Driscoll rnh. Cd. gas sd. 3,808-36 ft.; T.D. 3,835 ft.; perf. csg. 3,809-17 ft.; I.P. 118 B. P.D.; 5/32-in. ck.
Texas Conservative Oil Co. No. 1 J. E. Humble, Geo. H. Pauls subd., Driscoll ranch. Drlg. sh. 4,420 ft.

Refugio County

Hewitt & Daugherty No. 2-A J. M. Aldrete Sur. Drlg. sh. 3,267 ft.
Humble O. & R. Co. No. 3 Laura Thomas, Patrick Downey Sur. Cg. 6,164 ft.
Phillips Pet. Co. No. 1 N. S. Hundson, T. Antonio Gallan Sur. Spd.
Phillips Pet. Co. No. 1 Toland, Guadalupe Cobian & Family Sur. Loc.
Quintana Pet. Corp. No. 10 Williams, C. E.P.I.&M. Co. Sur. T.D. 6,220 ft.; perf. csg. 5,870-80 ft.; flwd. O.&S.W.; tstg.; no report.

San Patricio County

Seaboard Oil Co. No. 1 Blumberg. Loc.

Starr County

Herbert Aid No. 1 J. G. Escobas, J. J. Gutierrez Porc. 72. Bldg. drk.
Baldridge & Vessels No. 1 W. I. Cameron, Geo. W. Smith Sur. No. 228 (Rincon field). Drlg. 1,207 ft.
Banks, Miller Oil Co. No. 1 McLean, Unit 3, Valle Del Rico Rio Grande subd., J. B. Villareal Porc. 75. Drlg. 1,225 ft.
C. L. Foster No. 1 H. Garza, Juan Salinas, Porc. No. 71. S.D. 83 ft.
Liberty Oil Co. No. 1 Bass, S.K.&K. Sur. No. 71. S.D. 150 ft.
Lynes & Robertson No. 1 Villareal, C.C. S.D.&R.G.N.G.R.R. Sur. No. 241. Loc.
Magnolia Pet. Co. No. 2 Guerra, Santa Cruz gr. Drk.
W. W. Zimmerman No. 3 Tijerina, H. E.&W.T.R.R. Sur. No. 299. S.D. 600 ft.

Travis County

Oscar Raesz et al No. 1 J. W. Swahn, Phillips McElroy Sur. No. 16. S.D. 566 ft.
Williams & Bick No. 2 Montpelier Savings Bnk., C. Barker Sur. No. 38. Drlg. sh. 65 ft.; no report.

Webb County

J. M. Anderson et al No. 1 Frost, C.C.S. D.&R.G.N.G.R.R. Sur. No. 17. Loc.
F. J. Hines No. 1 Bruni, M. T. Tippin Sur. Drlg. 1,129 ft.
Magnolia Pet. Co. No. 5 Yoipe-Benavides, B.S.&F. Sur. No. 695. T.D. 2,466 ft.; oil sd. 2,458-66 ft.; swbg.; showing small amt. of oil, mostly fresh wtr.; 7-in. csg. 2,456 ft.; pmpd. 50 B.O.; 12 hr.
Gordon Rouse No. 1 Withers, G. B. Withers Sur. No. 52. S.D. 1,010 ft
Rowan & Hope, Inc., No. 2 Laurel Bros., A. S. Laurel Sur., Blk. 4. R.U.
Rowe & Scheig No. 1 Kirkpatrick, C.C. S.D.&R.G.N.G.R.R. Sur. No. 59. Loc. abd.

Willacy County

Midwest Royalty Co. No. 1 Dayton, San Juan Decarriutas San Matias subd., Sh. No. 47. 10¾-in. csg. 2,370 ft.; T.D. 8,725 ft.; W.O.

Williamson County

W. O. Caffey No. 1 J. Seggern, Hardy Pace Sur. S.D. 1,067 ft.

Wilson County

John F. Camp No. 1 Bundrick, H.&T.C. R.R. Sur. No. 111. 10-in. csg. 272 ft.; drlg. chk. 3,490 ft.

Zapata County

Joe Martinez No. 2 Bruni, J. V. Borego gr. S.D. 355 ft.

WEST TEXAS WILDCATS

Andrews County

Richmond Drlg. Co. No. 1 University, Sec. 25, Blk. 12, Univ. Sur. Drlg. 4,-260 ft.

Brewster County

H. D. Wilcox No. 2 Kokernot, Sec. 23, Blk. C, J. V. Massey Sur. Drlg. 1,175 ft.; no report.

Cochran County

T. G. Shaw, Tr., No. 1 Carrie S. Dean, Lge. 94. Comp.; 402 B.O.P.D.; T.D. 5,001 ft.

Crane County

P. A. Christian No. 1 M. F. Stephenson, Cert. 2044. W. H. Bates Sur. No. 40. S.D.O. 3,335 ft.
Gulf Oil Corp. No. 5 M. B. McKnight, Sec. 1, Blk. 21-B, P.S.L. Sur. Drlg. 4,-030 ft.

Crockett County

J. S. Pittman No. 1 Corbett-Humble, Sec. 15, Blk. 2-B, G.C.&S.F. Sur. Drlg. 55 ft.
Steel Dust Oil Co. No. 1 Geo. D. Atwood, Sec. 9, Blk. P.P., T.C.R.R. Sur. Spdg.

Crosby County

Gulf Oil Corp. No. 1-C Swenson, Sec. 95, Blk. 2, H.&G.N. Sur. Drlg. 5,111 ft.

Dickens County

Bond D. Jones No. 1 Ford et al, I.&G.N. Sur. S.D. 3,662 ft.
Humble O. & R. Co. No. 1 Matador Ld. & Cattle Co., Sec. 26, Blk. 1, Shock & Arnold Sur. T.D. 7,074 ft.; drlg. plug 6,925 ft.; P.B. 6,133 ft.; prep. test.

Ector County

Barnes-Conklin & White No. 1 T.&P. Lds., Sec. 28, Blk. 45, T.&P. Sur. Drlg. 4,722 ft.
R. H. Gill No. 1 J. E. Parker, Sec. 12, Blk. 45, T.&P. Sur. W.O.R. 145 ft.
Lee Drlg. Co. No. 1 J. L. Johnson, Sec. 5, Blk. 42, T.&P. Sur. Comp.; 476 B. O.P.D. at 4,309 ft.
Sloan & Zook No. 1 J. L. Johnson, Sec. 34, Blk. 43, T.&P. Sur. Drlg. 3,838 ft.

El Paso County

Tri-State Oil Co. No. 1 Kinkel. R.U.S.T.; to P.B. and sdtrk.; T.D. 3,571 ft.; sidetracking hole 1,925 ft.; fsg. tools 1,-920 ft.

Gaines County

Humble O. & R. Co. No. 1 W. T. Caswell, Sec. 10, Blk. 24-A, P.S.L. Sur. D.&A. 5,002 ft.
Stanolind O. & G. Co. No. 1 J. B. Rayner, Sec. 3, Blk. 30-C, P.S.L. Sur.; 6,-000-ft. test. Bldg. roads.

Glasscock County

J. R. Petty No. 1 Joe Blake, Sec. 163, Blk. 29, W.&N.W. Sur. U.R. 1,480 ft.
Shell Pet. Corp. No. 1 A. Neal, Sec. 38, Blk. 33, T.&P. Sur. Drlg. 3,550 ft.

Howard County

T. G. Shaw, Tr.-Texas Co. No. 1-B Wilkinson, Sec. 19, Blk. 34. Drlg. 4,363 ft.

Hudspeth County

Haymon Krupp Oil & Ld. Co. No. 1 Thaxton, SE¼ Sec. 34, Blk. 74, Twp. 6, S.G. 6,340-45 ft.; swbg. 6,402 ft.
Haymon Krupp No. 1 Briggs, Sec. 24, Blk. 73, Twp. 7, T.&P. Sur. Drlg. 5,-454 ft.

Lynn County

John L. Baldridge No. 1 Alma Lbr. Co., Sec. 151, H.E.&W.T. Sur. S.D.O. 4,450 ft.

Pecos County

L. Cain No. 1 Masterson-Lehn, Sec. 71. Blk. 10, H.&G.N. Sur. Drlg. 1,160 ft.
Greene & Goodman No. 1 Masterson, Sec. 105, Blk. 10, H.&G.N. Sur. U.R. 8-in. at 752 ft.
Leidecker & Cain No. 1 M. M. Lehn, Sec. 71, Blk. 10, H.&G.N. Sur. Cag. 1,743 ft.; flwg. 20 B.O.; 24 hr.; tstg. 1,783 ft.
Lloyd-Penn & Hargraves No. 1 H. E. Bonebrake, Sec. 110, Blk. 8, H.&G.N. Sur. Drlg. 75 ft.
O. E. Schade No. 1 Otis Garrett, Sec. 59¼, Blk. 8, H.&G.N. Sur. Tstg. est. 35 B.O.P.D.; T.D. 2,290 ft.; swbg. est. 20 B.O.P.D.; 5 B.W.P.D.; tstg. on pmp.
Superior Oil Co. No. 1 V. W. Crockett, Sec. 7. Blk. 110, T.C.R.R. Sur. C.&P.
Superior Oil Corp. No. 1 V. W. Crockett, Sec. 5, Blk. 110, T.C.R.R. Sur. P.B. 1,447 ft.
S. Thompson No. 1 Elsinore Cattle Co., Sec. 54, Blk. D, G.C.&S.F. Sur. Rig burned; dropped bailer in hole; S.D.O. 7,342 ft.
J. C. Trees No. 1 fee, Sec. 63, Blk. 3, H.&G.N. Sur. Tstg. on pmp.; est. 5 B. O.P.D. and 5 B.W.P.D.; S.D.O. 2,359 ft.
C. W. Williams No. 1 J. Eaton, Sec. 1,

Blk. 203, J. H. Handy Sur. S.D.R. 2,914 ft.
C. W. Williams No. 1 T.&P. Ld., Sec. 95, Blk. 3, T.&P. Sur. Drlg. 1,836 ft.

Presidio County

L. C. Brite No. 4 fee, Sec. 113, Blk. 12, G.H.&S.A. Sur. S.D.O. 5,602 ft.
Marfa Oil Co. No. 1 Fischer ranch, Sec. 31, Blk. 8, G.H.&S.A. Sur. M.I.M.
H. D. Wilcox No. 2 Jones-Coffield, Sec. 308, Blk. 4, H.&T.C. Sur. C.O. 1,840 ft.

Reeves County

Artie Baker No. 1 J. W. Grider, Sec. 31, Blk. 58, P.S.L. Sur. S.D.R. 450 ft.

Schleicher County

Lone Star Gas Co. No. 1 Bert Page, Sec. 30, Blk. L, G.H.&S.A. Sur. T.D. 5,746 ft.; flwd. 110 B.O.P.D.; tstg.
Shell Oil Co., Inc., No. 1 Page, Sec. 41, Blk. L, G.H.&S.A. Sur. Abd. loc.

Scurry County

J. B. Stoddard No. 1 R. O. McClure, Sec. 142, Blk. 97, H.&T.C. Sur. Drlg. 2,770 ft.
H. C. Wheeler No. 1 M. Sims, Sec. 141, Blk. 97, H.&T.C. Sur. Tstg. 2,509 ft.

Stonewall County

Forest Dev. Co. and King Drlg. Co. No. 1 Moreland, Sec. 183, Blk. D, H.&T. C. Sur. Drlg. 5,019 ft.

Terrell County

Shirley, Lanham & Blakeney No. 1, Sec. 45, Blk. 2-B, C.C.S.D.&R.G.N.G. Sur.; 2,500-ft. test. S.D. csg. 268 ft.

Tom Green County

Lynn & Cobb No. 1 I. B. Cox, Val. Mueller Sur. No. 176. S.D. 368 ft.
Dan Short et al No. 1 J. G. Davidson, NW part of Lovie P. Moore Sur. Drlg. 1,880 ft.
Southern Cross No. 1 Upton & Upton, Sec. 20, Blk. A, A.B.&M. Sur. Drlg. 5,100 ft.
Spinner No. 1 Reed, Mason Ferry Ranch Sur. S.D.O. 5,803 ft.; tools out of hole.

Yoakum County

W. A. Hudson No. 1 J. D. Webb, Sec. 545, Gibson Sur. Prep. P.B. 5,120 ft.
Shell Pet. No. 1 Waples-Platter, Sec. 616. Tstg. 5,380 ft.; hole fills at rate of 100 ft. per hr.; making 1 baller of wtr. per hr.; P.B. 5,312 ft.; pmpg. 145 B.O. P.D., 30% S.W.; prep. S.D.O. 5,380 ft., T.D.

TEXAS PANHANDLE

Armstrong County

Holmes, Newblock & Haley No. 1 Ed Moore, Sec. 319, Blk. 4-B, H.&G.N. Sur. Drlg. 865 ft.

Castro County

English et al No. 1 Gundlach, NW¼ Sec. 145, Blk. 6-M, S.K.&K. Sur. Loc.

Collingsworth County

Johnson No. 1 Taylor, Sec. 10-17, H.&G. N. Sur. T.A. 875 ft.

Deaf Smith County

Uscan No. 1 Farwell, Sec. 18, Blk. 3, X. Sur. U.R. 5,626 ft.

Gray County

Products O. & G. Co. No. 1 Mason Davis, Sec. 23, Blk. 23-M, H.&G.N. Sur. Loc.

Lipscomb County

Phil O'Neil No. 1 J. Kock, NW SW Sec. 539, Blk. 43, T.&T.C. Sur. S.D. 480 ft.

Roberts County

E. J. Dunigan, Jr., No. 1 Ledrick, Sec. 34, Blk. C, G.&M. Sur. D.P. stk. 3,760 ft.

Wheeler County

Smith Bros. No. 1 Ribble, Sec. 46, Blk. 5-A, H.&G.N. Sur. S.D. 2,710 ft.

E. C. TEXAS WILDCATS

Angelina County

Ginter Bros. and Jones No. 6 Copes Hrs., J. Morin Sur., 3 mi. E of Diboll. Tstd. wtr. 2,190 ft.

Ellis County

C. M. Beckner et al No. 1 H. A. Styles, A. Bullock Sur., 3½ mi. W of Maypearl. Drlg. 648 ft.

Falls County

M. A. Hayes No. 1 D. G. Wooten, J. Powell Sur., 8 mi. SE of Zott. Drlg. 1,400 ft.
Jack Shaunfield No. 1 Bargonier, J. M. Graham Sur., SE of Chilton. Drlg. 830 ft.

Fannin County

H. W. English No. 1 T. W. Ayers, J. D. Seales Sur. S.D. 160 ft.

Freestone County

Brothers Oil Co. No. 1 P. D. C. Ball, M. Rionda Sur., 5 mi. NW of Butler. Loc.
J. R. Bunn No. 1 S. Jeffries, W. A. Bishop Sur., 8 mi. NE of Streetman. D.&A. 3,958 ft.
J. R. Bunn No. 1 Robinson, J. L. Bennett Sur., 4 mi. E of Streetman. Drlg. 70 ft.
W. H. Keeling No. 1 Bounds-Longbotham, R. B. Longbotham Sur. S.D. 20 ft.

Grayson County

John Grey No. 1 Freedman, W. S. Reeves Sur., 8 mi. NW of Denison. O.S. 1,357-59 ft.; S.D. 1,381 ft.; S.O.; tstd. S.W.; S.D.; W.O. 1,407 ft.
Jim McMurrey No. 1 Dr. T. J. Long, J. Garland Sur., 2 mi. S of Collinsville; 4,000-ft. test. S.D.O. 3,929 ft.
Prince Bros. No. 1 Williams, S. Nix Sur., 2 mi. NE of Van Alystine. S.D. 1,173 ft.
Ross & Marshall No. 1 J. N. Taylor, W. Moore Sur., 8½ mi. NW of Denison.
Sinclair Prairie Oil Co. No. 1 M. Williams, R. H. Sowell Sur., 1 mi. SW of Collinsville. Prep. abd.

Henderson County

Richards & Holloway, Inc., No. 1 G. E. Murphy, J. M. Gardner Sur., 6 mi. SW of Mabank. T.D. 3,159 ft.; S.I. storage.
Richards & Holloway No. 1 Rowe & Baker, J. T. Childers Sur., 6 mi. SW of Mabank, 400 ft. W of Tyler & Smith No. 1 Rowe & Baker discovery well. D.&A. 3,193 ft.
Tide Water-Seaboard-Humble No. 1 Lewis, J. K. Stokes Sur., 1 mi. N of Opelika. Drlg. 7,492 ft.
Tide Water-Seaboard-Humble No. 1 Scott, C. Robb Sur., 3 mi. SW of Opelika area. Drlg. 7,720 ft.

Hill County

A. V. Abernathy and L. N. Sanders No. 1 E. M. Farrell, M. Mata Sur., ¼ mi. NE of Mt. Calm. S.D. 935 ft.

Houston County

G. C. Dixon No. 1 W. Goodman, J. J. Thomas Sur., ¾ mi. E of Lovelady. Cg. 1,938 ft.

Kaufman County

Sam Knoerr No. 1 J. B. Hunter, P. Walker Sur., 5 mi. S of Trenton. Drlg. 2,630 ft.
McGee No. 1 San Antonio Land & Cattle Co., E Higdon Sur. Loc.
W. G. McGee No. 1 General American Life Ins. Co., John Baker Sur., 6 mi. W of Mabank. T.S. 3,070 ft.; S.O.; bailing 3,093 ft.; S.D. 3,093 ft.
Tyler & Smith No. 1 Trinity farms, G. Crocher Sur., 3½ mi. SW of Mabank. Drk.

Leon County

Humble O. & R. Co. No. 1 L. Campbell, Wm. Little Sur., NE offset to No. 1 Jackson. Loc.
Humble O. & R. Co. No. 1 W. Johnson, W. Little Sur., outpost to Humble-Harris area. T.D. 5,904 ft.; prep. test.

Limestone County

Albert Baggett No. 1 J. L. Thompson, P. Varela Sur. S.D. 15 ft.
W. H. Foster No. 1 J. P. Key, Roxelia Sur., 1 mi. SE of Datura. D.&A. 3,020 ft.

Nacogdoches County

D. McDaniels No. 1 T. H. Seale, J. A. Cherino Sur., just outside of city limits of Cherino. S.D. 690 ft.

Rains County

McKinley & Hastings No. 1 McTaggart, B. Milder Sur., 1 mi. W of Emory. S.D. 720 ft.

Navarro County

Topaz Oil Co. No. 1 E. Trammel, R. Mathews Sur., 4 mi. NE of Bazzett. Pits.

Red River County

Kansas-Oklahoma Pet. Corp. No. 1 R. H. Ringwald, A. Moore Sur., 3 mi. W of Manchester. Drlg. 450 ft.

Robertson County

J. E. Cox No. 1 Sandifer, H. Henry Sur., 3½ mi. SE of Franklin. Loc.

Rusk County

Golden Rod Drlg. Co. No. 1 Hall Wood, J. I. Sanches Sur., 1½ mi. NW of Salem. Drlg. 2,815 ft.
Hamm & Bogges No. 1 W. G. Ross, J. McCune Sur., 3 mi. NW of Mount Enterprise. S.D. 2,946 ft.

Smith County

J. H. Thomason No. 1 J. W. Bartlett, R. H. Stewart Sur., ½ mi. SE of Jamestown. S.D. 2,004 ft.

Titus County

Superior Oil Co. No. 1 John Hargraves, S. B. Patton Sur., 8 mi. S of Mt. Pleasant. W.O.C. 270 ft.

Trinity County

McApline No. 1 C. V. Dilley, J. Grissett Sur., 7 mi. N of Trinity. Drlg. 2,316 ft.

Van Zandt County

F. A. Richardson No. 1-A B. C. Dodd, T. W. Hutchinson Sur., 2 mi. S of Grand Saline. Drlg. 4,888 ft.

NORTH TEXAS WILDCATS

Archer County

A. H. Fraser No. 1 W. M. Coleman, Lot 56, Brazos Co. Sch. Ld., Sur. A-18. Drlg. 2,125 ft.
G. E. Kadane & Sons No. 1 J. Hemmi, Sec. 60, Clark & Plumb Sur., Blk. 3. T.D. 5,314 ft.; 6⅝-in. 5,150 ft.; S.L. 5,-174-5,220 ft.; retreated 10,000 gal. acd.; C.O.; tstg.
W. B. Omohundro No. 1 A. B. Peckham, Sec. 22, H.&T.C. Sur., Blk. 1. Drlg. 5,018 ft.

Baylor County

British Am. O. P. Co. No. 1 F. C. Green "L," Sec. 8, H.T.&B. Sur. 6⅝-in. 3,130 ft.; perf. 3,060-65 ft.; S.O.&G.; tstg. after perf.; est. 25 B.P.D.; tstg.

Clay County

L. T. Burns No. 1 E. F. Calloway, Lot 9, Hopkins Co. Sch. Ld. Set surf.; W.O.C.
L. T. Burns No. 1 C. L. Wynn, H. Williams Sur. A-704. Drlg. 4,465 ft.; had S.S.O. 4,395-4,415 ft.; Schlumberger survey showed some sat.; S.D.O. 5,203 ft.
Burns and Consolidated Oil Co. No. 1 G. A. Sealing, Sec. 6, H.T.&B. Sur. A-879. 6⅝-in. 4,440 ft.; O.S. 4,439-64 ft.; shot 60 qt.; C.O.; show scum oil.
J. E. Farrell No. 1 C. P. Malone, Sec. 12, T.&N.O. A-828 Sur. Drlg. 4,585 ft.
Frabar-Hodges and Mid-Union Drlg. Co. No. 1 Mrs. R. C. Kinder, Lot 11, Clark & Plumb Sur., Blk. 2. Drlg. 4,920 ft.
Shell Oil Co., Inc., No. 1 W. A. Davis, Sec. 93, J. H. Belcher Sur. Bailing S. S.O. 4,923-5,012 ft.; 6⅝-in. 4,923 ft.; W. O.C.; T.D. 5,100 ft.; S.D.O.

Cooke County

Sinclair Prairie No. 10 J. M. Best, T. Toby Sur. A-1054. T.D. 5,643 ft.; rng. Schlumberger.

Hardeman County

Amerada Pet. Corp. No. 1 W. M. Rice, Sec. 81, W.&N.W. Sur. Loc.
M. M. Cooke No. 1 Mrs. M. D. Norton, Sec. 3, E.L.&R.R. Sur. Spdg.

Jack County

Samuel Edelman No. 1 A. B. Griffith, S. Tollett A-1436 Sur. R.U.C.T.

Montague County

Bridwell Oil Co. No. 1 H. A. Reynolds, Sec. 9, E.T.R.R. Sur. S.D.O. 5,400 ft.
Cordova-Union Oil-Gillespie No. 1 Cable, Stephenson Sur., Abst. 462. S.D.O. 4,-550 ft.
E. B. Madden No. 1 Smith, H. N. Baker A-49 Sur. Fsg. 3,192 ft.
Sinclair Prairie Oil Co. No. 1 Whaley, Sec. 16, B.B.B.&C. A-86. Sur. Drlg. 2,787 ft.

Wichita County

Hanlon-Buchanan, Inc., No. 1 Fassett & Tuttle "F," D.L.&C. Sur. A-596. 6⅝-in. 4,040 ft.; L.&O.S. 4,061-92 ft.; shot 155 qt.; tstg. est. 100 bbl.; C.O.; tstg.

Wilbarger County

Lawson & Leavell No. 16 W. T. Waggoner A. Sec. 109, H.&T.C. Sur., Blk. 14; 3,500-ft. test. S.D.O. 1,445 ft.

Wise County

H. Jackson No. 1 F. Neeley, Blk. 29, Matagorda Co. Sch. Ld. Spd. and S.D.
H. M. Muse No. 1 F. F. Kaker, Blk. 16, Matagorda Co. Sch. Ld. Pits.

Young County

Hull & Silk No. 1 H. N. Tucker, Sec. 180, T.E.&L. Sur. Drlg. 3,782 ft.
H. M. Leidecker No. 1 J. M. Nail, Sec. 1997, T.E.&L. Sur. 6⅝-in. 3,095 ft.; 5¾-in. 4,448 ft.; drlg. plug; tstg. 2,000 ft.; flwd. 159 bbl. in 30 min. and S.I. W.O.T.

WEST CENTRAL TEXAS DISTRICT

Brown County

T. W. Allmon No. 1 Almeda Moore, Jesse Williams Sur. No. 144, Abst. 931. S.D.O. 1,375 ft.
Dan Hartzell No. 1 H. D. Browning, Blk. 31, Chas. Messer Sur. No. 127. S.D.R. 600 ft.
Lancaster & Melton No. 1 McArthur, B. S.&F. Sur. No. 33, Abst. 133. D.&A. 1,403 ft.
Lynn No. 1 Nesbitt Rice, M.E.P.&P. Sur., Blk. 25. S.D. csg. 950 ft.

Callahan County

Bayou Oil Co. No. 1 W. E. Jones, Sec. 84, Comal Co. Sch. Ld. Sur. Loc.
H. M. Black No. 1 J. R. Jones, J. Van Winkle Sur. No. 3. Drlg. 200 ft.
J. W. Dobbs Oil Corp. No. 2 Finley, Sec. 75, Bayland Orphans Home Lds. Skd. rig 50 ft.; S.D.R. 920 ft.
F. & M. Drlg. Corp. No. 1 W. A. Ramsey, Sec. 2277, T.E.L. Sur. Mchry.
S. Herndon No. 1 W. L. Toland, Sec. 27, Blk. 5, S.P.R.R. Sur. Drlg. 540 ft.
D. B. McCall No. 1 J. E. Woods, Sec. 127, Univ. Lds., Abst. 14. S.D.O. 2,-229 ft.
E. L. Thomas No. 1 Ramsey, Sec. 104, B.B.B.&C. Sur. S.D. with S.O. at 1,-270 ft.
T. Whittmer No. 1 I. N. Jackson, Sec. 15, E.T.R.R. Sur. Loc.

Coleman County

States Oil Corp. No. 1 Goodson A, Sec. 23, Blk. 2, T.&N.O. Sur. Tstg. oil sd. 3,629 ft.

Concho County

Clymore Co., Inc., No. 1 Hill, J. Frederick Sur. S.D. 2,565 ft.
Floyd Dodson No. 1 Robert Wilson, Thomas Green Sur. Mch.
National Resources No. 1 Armon, Sec. 105, Blk. 72, T.&N.O. Sur. S.D.R. 700 ft.

Eastland County

L. H. Choate No. 1 C. L. Yancey, Sec. 151, Blk. 2, H.&T.C. Sur. D.&A. 1,-218 ft.
R. R. Groce No. 1 J. M. Rush, Sec. 130, Blk. 3, H.&T.C. Sur. Drlg. 200 ft.
W. T. Luton No. 1 R. Been, Sec. 13, Blk. 3, H.&T.C. Sur. S.D. 258 ft.
John L. Reeves No. 1 Jas. Weaver, Blk. 55, McLennan C.S.L., League 304. Drlg. 1,075 ft.
W. R. Ritchey No. 1 Weddington, Sec. 2054, T.E.&L. Sur. Fsg. U.R. lugs at 2,790 ft.
W. A. Stiles No. 1 J. Lyerla, SE part of Ussury Sur. No. 20. Drlg. 850 ft.

Erath County

Wayne Chandler No. 1 Chandler, J. W. Moore Sur., Abst. 571. S.D.R. 4,678 ft.
T. Gray No. 1 C. Young Hrs., NW cor. of Stephen Smith Sur., Abst. 682. Loc.

Fisher County

Frank Bennett No. 1-A Martin, Sec. 113, Blk. 1, H.&T.C. Sur. Prep. D.D. 3,-301 ft.

Hamilton County

Wallace & Vickers No. 1 C. C. Lund, J. P. Bailey Sur. 51. S.D.O. 3,430 ft.

Haskell County

E. W. Marland No. 1 Cobb, Sec. 96, Blk. 1, H.&T.C. Sur. Drlg. 1,320 ft.

Jones County

J. L. Douglas No. 1 J. M. Blanton, SW cor. of S. L. Underwood Sur. No. 1. Drlg. 1,240 ft.
Ed. L. Evans No. 1 B. J. Crier, Sec. 8, B.A.L. Sur. S.D.O. 1,721 ft.; est. 10 B. O.P.D.
Fain-McGaha Oil No. 1 J. H. Harris, Blk. 79, DeWitt C.S.L. Sur., 5 mi. W. of Akard pool. Drlg. 2,055 ft.
Gillespie et al No. 1 J. D. Samples, Sec. 45, Deaf and Dumb Asylum Lds. Drlg. 3,100 ft.
Gregg Oil Co. No. 2 Appling, SW¼ Sec. 32, B.B.B.&C. Sur. Drlg. 1,705 ft.
E. C. Lawson No. 1 M. M. McNair, Lot 3, Blk. 5, Lawson Sur., 4 mi. SW of Lueders. Drlg. 1,905 ft.
Noark et al No. 1 D. Southard, Sec. 8, D.&D.A. Sur., 2 mi. NW of Griffin pool. Drlg. 1,615 ft.
Phillips Pet. Co. No. 1 J. R. Montgomery, Sec. 5, Blk. 16, T.&P. Sur. Drlg. 1,540 ft.
Quality Prod. No. 1 Radford, SE¼ Sec. 20, Blk. 16, T.&P. Sur. Drlg. 1,785 ft.
S. B. Roberts Co. No. 1 C. Herndon, Sec. 6, M.E.P.&P. Sur., 2 mi. S of Anson. Straightening hole 670 ft.
Shaheen & Keeler No. 1 Radford, between Sayles and Akard pools. Drlg. 1,215 ft.
A. H. Tarver No. 1 A. S. Barkley, Sec. 54, Deaf and Dumb Asyl. Lds. Drlg. up lugs 2,562 ft.

Mills County

D. Lane No. 1 J. W. Spinks, J. Douglas Sur. No. 5. Drlg. 100 ft.

Nolan County

Green & Owens No. 1 Tipton, Sec. 43, Blk. 19, T.&P. Sur. Fsg. csg. 4,464 ft.

Palo Pinto County

J. W. Lane No. 1-A R. S. Dalton, Sec. 1789, T.E.&L. Sur. Comp.; 5 B.O.P.D.; T.D. 1,222 ft.
Palo Pinto O. & G. Co. No. 1 A. P. Wilbar, Blk. 59, Burleson C.S.L. R. U.M.

Shackelford County

Everts No. 1 Dawson & Conway, Sec. 175, E.T.R.R. Sur. D.&A. 1,803 ft.
Hedrick Oil No. 1 Carey, Sec. 51, Blk. 14, T.&P. Sur. U.R. 1,502 ft.; T.D. 1,747 ft.
C. R. Schuster No. 1 L. E. DeWitt, Blk. 56, Univ. Lds. Loc.

Stephens County

Geo. E. Fagg No. 1 Richardson, Sec. 5, Blk. 31, S.P.R.R. Sur.; 4,000-ft. test. Loc.
Falcon Co. No. 1 B. T. Hopper, Sec. 1142, T.E.&L. Sur. Drlg. 3,311 ft.
Lone Star Gas Co. No. 1 O'Conner, T.D. 2,195 ft.
A. G. Swanson No. 1 Veale-Frost, Sec. 37, Blk. 8, T.P. Sur. S.D.R. 53 ft.
Whittmer O. & G. Co. No. 1 Loving, Sec. 66, B.A.L. Sur.; Ellenberger test to 4,500 ft. Drlg. 1,350 ft.

Taylor County

Tal Vez Oil Co. No. 1 Hugo Calle, Lot 8, Lge. 120, Guadalupe Co. Sch. Ld. Sur. T.D. 2,347 ft.; comp.; 18,490,000 cu. ft. gas.

EAST TEXAS

(Border Counties)

Cass County

Red Iron Drlg. Co. No. 1 N. S. Spearman, Samuel Burnham Sur. Set 13⅜-in. surf. csg.; W.O.C.

Harrison County

Ark. La. Gas Co. No. 1-B Abney, J. J. Blair Sur. Tstd. 1,500,000 cu. ft. gas 4,802 ft.; drlg. ahd. 4,840 ft.

Marion County—Rodessa

Cable Tool Drlg. Co. No. 1 Sol Smith, 345 ft. WL, 450 ft. SL lse., J. Hanks Sur. Drlg. L.&sh. 5,710 ft.
Magnolia Pet. Co. No. 1 Duncan Est., 216 ft. NL, 1,105 ft. EL lse., T. M. Davis Sur. Drlg. L.&sh. 5,160 ft.

Shelby County

W. H. Neal et al No. 1 A. McDaniel, 150 ft. SL, 200 ft. EL, Wm. Snider Sur. M.I.M.

Rocky Mountain Runs

Production estimates for the week ended June 24 follows:

	Barrels
WYOMING	
Salt Creek	14,880
Big Muddy	1,190
Byron	4,040
Elk basin	560
Frannie	1,400
Garland	2,770
Grass Creek	3,990
Hamilton dome	2,030
La Barge	800
Lance Creek	16,440
Lost Soldier	1,760
Medicine Bow	1,760
Oregon basin	2,330
Osage	800
Quealy dome	650
Rock River	2,940
Wertz	1,570
Miscellaneous	1,490
Total Wyoming	61,400
MONTANA	
Border	110
Cat Creek	560
Cut Bank	8,790
Dry Creek	270
Kevin-Sunburst	4,390
Pondera	920
Total Montana	15,040
COLORADO	
Florence	160
Fort Collins and Wellington	310
Wilson Creek	320
Iles dome	2,030
Moffat	310
Orchard	30
Rangely	30
Tow Creek	160
Price	690
Total Colorado	4,040
NEW MEXICO	
Cooper	4,520
Eaves	940
West Eunice	110
Eunice	23,970
Hardy	3,730
Hobbs	12,920
Jal	730
Langlie	5,760
Lynch	540
Lynn	840
Matlix	4,700
Monument	25,180
North Lynch	40
Penrose	5,770
Rhoades	130
Skaggs	90
Skelly	1,960
South Eunice	4,040
South Lovington	530
Vacuum	10,450
Artesia-Maljamar	8,920
Getty	100
Hogback	200
Rattlesnake	560
Table Mesa	70
Total New Mexico	116,800
Total Rocky Mountain region	197,280

Eastern Fields

(Continued from Page 79)

wood district. In Ripley district Columbian Carbon Co. has rigged up on the John F. Parsons farm, northeast of Ripley.

In Jackson County, Everett Starcher and others are drilling at 3,400 ft. on the D. M. Boggess farm and rigging up on the Rosa Boggess farm. In Washington district, United Carbon Co. is drilling at 4,353 ft. in No. 4 Elizabeth W. Perkins.

In Boone County, Owens-Libby-Owens Gas Co. has resumed drilling No. 13 Bull Creek Coal & Land Co., in Peytonia district, and has reached 5,987 ft.

New Work

In Brooks County, Wheeling Steel Co. has locations for Nos. 104 and 105 George R. Nothrop in Cross Creek Township, both elevations 742 ft.

In Calhoun County, Gunn, Gainer & Gunn will drill on the Whitt Stump farm in Sherman district, elevation 790 ft. McIntosh & Grimm have a location on the Creed Yoak farm, elevation 1,083-81 ft.

In Clay County Thompson Gas Co. has a location for No. 16 Thompson Coal Land Co., in Pleasant district, elevation 937.68 ft. In Otter district Pittsburgh & West Virginia Gas Co. will drill No. 7687 J. D. Duffield, elevation 981 ft., and No. 7686 Norman Good, elevation 775 ft.

In Doddridge County, Hope Natural Gas Co. will deepen No. 5480 Ellen Call in New Milton district, elevation 958 ft. In Grant district, Pittsburgh & West Virginia Gas Co. is down 1,590 ft. on the No. 6092 J. L. Carr. In Greenbrier district, O. R. Garrett, Jr., is drilling at 510 ft. on the Luverna B. Gainer test.

In Ritchie County John R. Geho will drill a second test on the W. B. Morris heirs farm in Murphy district, elevation 1,029 ft. In Grant district A. R. Kelley is drilling at 679 ft. in the Clem Ingram test.

In Roane County W. B. Heeter has a location on the W. A. Havertly and T. Morris Perot farm in Smithfield district, elevation 864.07 ft. In Harper district O. H. Reed and others will drill on the M. H. Hughes and others farm, elevation 967.51 ft.

In Wayne County R. H. Adkins has a location on the Mack Adkins, Union district, elevation 640 ft. In Wetzel County, Busch & Ferrell will drill on the Sivert heirs in Proctor district, elevation 1,270 ft.

WEST TEXAS DRILLING

(Continued from Page 25)

the Apco field is located, using the top of the Yates as a marker. Experience, however, has shown that Ordovician structures in no way conform in size or type to fields producing from the Permian traps above. General belief is that the older formation closely conforms to the position of the pre-Cambrian or other older beds, as is confirmed by the knowledge that most of the intense structural movements of that area took place during Pennsylvanian time. Thus, the Ordovician was involved and not the Permian which overlies the Pennsylvanian.

The Simpson was not present in the Apco well, the test entering the Ellenburger of Lower Ordovician after leaving the Permian. To the north some 11 miles Magnolia Petroleum Co. and Tex-Mex No. 1-A McKee, which was drilled below 6,260 ft. to find the Ellenburger barren, topped the Simpson high at 4,755 ft. and drilled some 1,325 ft. of this formation before topping the Ellenburger. The test had several good showings of oil in the Simpson but operators were unable to complete as a producer. To the south of the Apco discovery several miles, Shell Oil Co., Inc., No. 1 Kirby found both the Simpson and Ellenburger missing, entering pre-Cambrian beds after leaving the detrital zone below the Permian.

Since the opening of the Pecos County field, Gulf Oil Corp. has staked location for a 7,500-ft. Ordovician test in extreme southwest Ward County, 20 miles northwest of the Apco well, on a block of 9,000 acres. Magnolia Petroleum Co. is also drilling another test 8½ miles northwest of the new discovery. This test topped the Yates at 1,370 ft. and is nearing 3,000 ft.

North Permian Activity

Drilling activity in the north Permian basin fields has shown a small but steady increase during recent months and is expected to reach even greater heights during the summer months. At present some 75 rigs are operating in the six pools comprising the north basin.

In January the six fields (Bennett, Duggan, Dean, Slaughter, Seminole, and Wasson) had 230 producers of which all but 33 were in Wasson-Bennett. Now the area has over 340 wells with about 300 in Wasson-Bennett. Some 80,000 acres have been semiproven by this activity, or a well density of only 1 to 250 acres.

The Wasson-Bennett area is the most active in all West Texas. Over 50 rigs are drilling in these two fields and producers are being completed at the rate of almost one a day. Although a distance of about 2½ miles still separates the two fields, it has been generally accepted by most West Texas geologists the two fields are producing from a common reservoir and that continued drilling will see the two united as has been done in a large number of instances in the fields further to the south.

STANDARD OIL CO. OF CALIFORNIA AND UNION OIL CO.
Crude oil prices at the well effective June 22, 1936

Gravity—	Signal Hill (Long Beach)	Seal Beach	Alamitos Heights	Huntington Beach	Inglewood	Playa del Rey	Olinda-Brea Canyon	Athens-Rosecrans	Dominguez	Elwood Terrace	Torrance	Richfield	Whittier E. Coyote (La Habra)	Montebello	W. Coyote Hills	Santa Fe Springs	Mountain View	Elk Hills Buena Vista Hills Midway-Sunset Lakeview Area	Lost Hills	Coalinga	Santa Paula*	Kettleman Hills	Wheeler Ridge	Orcutt*
14-14.9	$.80	$.79	$.74	$.78	$.79	$.80	$.76	...	...	...	$.80	$.76	$.76	$.77	$.78	...	...	$.70	$.70	$.70	...	...	$.70	...
15-15.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	...
16-16.9	.80	.79	.74	.78	.79	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.70	$.70
17-17.9	.80	.79	.74	.78	.81	.80	.76	...	...	...	.80	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.71	.70
18-18.9	.80	.79	.74	.78	.84	.80	.78	...	...	...	.82	.76	.76	.77	.78	...	...	.70	.70	.70	...	...	.73	.72
19-19.9	.82	.79	.74	.82	.87	.84	.81	...	...	...	.85	.76	.78	.77	.78	...	$.70	.74	.74	.71	$.70	...	.75	.74
20-20.9	.85	.79	.74	.85	.90	.88	.84	...	...	...	.88	.78	.82	.77	.80	...	.70	.78	.78	.72	.70	...	.77	.77
21-21.9	.88	.79	.74	.89	.93	.93	.88	...	...	...	.91	.80	.85	.77	.84	$.78	.73	.82	.82	.74	.70	...	.79	.80
22-22.9	.92	.82	.74	.92	.96	.96	.92	...	...	...	.93	.84	.89	.79	.88	.78	.77	.87	.86	.78	.72	...	.82	.83
23-23.9	.95	.86	.77	.96	.99	1.02	.96	$.84	$.79	...	.96	.88	.93	.82	.92	.78	.80	.92	.90	.82	.76	...	.85	.86
24-24.9	.99	.91	.80	1.00	1.02	1.06	.99	.88	.81	...	.99	.91	.96	.85	.96	.82	.84	.97	.94	.86	.79	...	.87	.88
25-25.9	1.03	.95	.82	1.03	1.05	1.11	1.03	.93	.83	...	1.02	.95	...	.89	.99	.86	.88	1.01	.98	.90	.88	...	.90	.91
26-26.9	1.06	1.00	.85	1.07	1.09	1.16	1.06	.98	.86	...	1.05	.98	...	.92	1.03	.90	.91	1.06	1.02	...	...	...	.92	.93
27-27.9	1.10	1.05	.88	1.11	1.12	...	1.10	1.03	.88	...	...	1.02	...	.96	1.06	.95	.95	1.10	1.06	...	...	...	.95	...
28-28.9	1.14	1.10	.90	1.14	1.15	...	1.14	1.07	.90	...	...	1.06	...	.99	1.10	.99	.99	1.15	1.10	...	...	...	.97	...
29-29.9	1.17	1.15	.93	1.18	1.18	F.O.B.	1.17	1.12	.93	...	...	1.00	...	1.03	1.14	1.03	1.02	1.20	1.14	...	...	...	.99	...
30-30.9	1.21	1.19	.95	1.22	1.21	our	1.21	1.17	.95	F.O.B.	...	...	...	1.07	1.17	1.08	1.06	1.25	1.18	...	...	...	1.01	...
31-31.9	...	...	...	...	1.24	Pipe	1.24	1.22	.97	Ship	...	...	...	1.11	1.21	1.12	1.09	1.29	...	...	...	...	...	...
32-32.9	...	...	...	...	1.27	Line	1.27	1.27	1.00	...	...	...	...	1.14	1.25	1.16	1.13	1.34	...	...	...	...	...	...
33-33.9	...	...	...	...	...	...	...	1.32	...	1.28	...	...	...	1.16	1.28	1.20	1.17	1.38	...	...	...	1.19	...	...
34-34.9	...	...	...	...	...	...	...	1.37	...	1.32	...	...	...	1.22	1.32	1.25	1.20	...	...	...	...	1.23	...	...
35-35.9	...	...	...	...	...	...	...	1.42	...	1.35	...	...	...	1.25	...	1.29	...	...	...	...	...	1.27	...	...
36-36.9	...	...	...	...	...	...	...	1.46	...	1.39	...	...	...	1.29	...	1.33	...	...	...	...	...	1.31	...	...
37-37.9	...	...	...	...	...	...	...	1.51	...	1.43	...	...	...	1.32	...	1.37	...	...	...	...	...	1.35	...	...
38-38.9	...	...	...	...	...	...	...	1.56	...	...	...	...	...	1.36	...	1.42	...	...	...	...	...	1.39	...	...
39-39.9	...	...	...	...	...	...	...	1.61	...	...	...	...	...	1.40	...	...	...	...	...	...	...	1.43	...	...
40-40.9	...	...	...	...	...	...	...	1.66	...	...	...	...	...	1.43	...	...	...	...	...	...	...	...	...	...

Newhall, McKittrick, Kern River, Kern Front and Round Mountain, 70 cents for all grades. *Posted by Union Oil Co. Same company's Brea Canyon schedule stops at $1.14 for 28 degrees and over, and Belridge and Lost Hills schedule stops at $1.32 for 37 degrees and over. By Standard Oil Co., effective October 15: El Segundo, 14 to 18.9 degrees, 80 cents; 19-19.9, 82 cents; 20-20.9, 85 cents; 21-21.9, 88 cents; 22-22.9, 92 cents; 23-23.9, 95 cents; 24-24.9, 99 cents; 25-25.9, $1.03; 26-26.9, $1.06; 27-27.9, $1.10; 28-28.9, $1.14; 29-29.9, $1.17; 30-30.9, $1.21. Wilmington, 14 to 16.9, 75 cents; 17-17.9, 77 cents; 18-18.9, 79 cents; from 19 degrees upward, prices same as Signal Hill.

Market Record of Active Oil Stocks

Compiled by Carl H. Pforzheimer & Co., 25 Broad Street, New York City, Member New York Stock Exchange and New York Curb Exchange

New York Stock Exchange

1939 High	1939 Low	Week ending June 24 High	Week ending June 24 Low	Week ending June 24 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
70	50	68¾	66½	66½	Amerada Corp.	788,675	N.P.	50cQ	1-31-39	$2.00	$2.07	$3.04	78	55	111⅞	51½
23½	18½	20¾	20	20	Atlantic Refining	2,663,999	$25	25cQ	6-15-39	1.00	1.40	3.51	27⅝	17¾	37	18
21½	10⅞	13¼	13	13	Barber Asphalt Co.	390,223	$10	75c	12-16-37	....	—.85	1.91	23¾	12⅛	43⅜	10⅛
19½	12⅜	14¼	13⅝	13⅝	Barnsdall Oil Co.	2,250,344	$5	25cQ	2-1-39	1.00	1.26	.85	21⅜	10⅛	35¼	10
9¼	7	8	7⅝	7¾	Consolidated Oil Corp.	13,751,846	N.P.	20cQ	8-15-39	.80	.55	1.48	10¾	7	17⅞	7
31½	21⅛	23½	22½	22¾	Continental Oil of Delaware	4,682,581	$5	25cQ	6-27-39	‖1.00	1.10	2.98	35¾	21¼	49	24
8⅜	4⅞	5⅞	5⅝	5¾	Houston Oil (new)	1,098,618	$25	....	10-17-30	....	.83	.94	9¾	5	17⅝	4¾
20¼	12⅜	14¾	14¼	14½	Lion Oil Refining	435,815	N.P.	25cQ	4-20-39	1.00	2.09	2.17	25⅛	15⅝	34	12½
16½	11⅛	13½	13¼	13¼	Mid-Continent Petroleum	1,857,912	$10	25c	6-1-39	.60	.56	2.86	22⅝	12¼	35⅜	14
14⅞	10⅜	11	11	11	Mission Corporation	1,379,245	$10	25c	6-29-39	1.00	1.04	1.31	17⅜	10⅝	34	15
15½	6½	8⅛	7½	7⅞	National Supply	1,155,517	$10	$2 pf.‡	12-22-37	....	—.79	4.90	23	12½	41⅜	17⅝
10¼	6⅝	7¼	7	7	Ohio Oil Co.	6,563,377	N.P.	20c	12-15-38	.20	.25	1.30	14⅞	8⅜	22⅞	8
34⅜	27½	9¾	9⅛	9¼	Pacific Western Oil	1,000,000	N.P.	50c	12-20-38	.50	1.22	1.39	15⅞	10¼	29¾	11¾
6¾	5½	..	..	..	Pan American Pet. & Trans.	4,702,945	$5	$1*	12-21-37	....	.08	1.18	9¼	6¼	17⅛	7
43¾	31¼	35¼	34⅜	35	Phillips Petroleum	4,449,052	N.P.	50cQ	6-1-39	‖2.00	2.03	5.42	44⅜	27¼	64	30⅛
22½	17¼	20⅛	19¾	19¾	Plymouth Oil Co.	1,006,200	$5	35cQ**	6-30-39	1.40	2.59	2.85	25⅜	15	29⅞	13
11¼	7	7⅝	7⅛	7¼	Pure Oil Co.	3,982,031	N.P.	25c	12-1-37	....	.38	2.15	13½	8¼	24⅜	8¾
10¼	6⅝	8⅛	7⅞	7⅞	Richfield Oil Corp.	4,010,000	N.P.	50c	12-21-38	.50	.51	.35	9⅞	5	6½	4¼
22⅜	16⅛	18⅜	18¼	18½	Seaboard Oil of Delaware	1,244,383	N.P.	25cQ	6-15-39	1.00	1.52	1.97	27½	15½	54⅛	16
15⅛	10⅝	11¼	10⅞	10⅞	Shell Union Oil	13,070,625	N.P.	35c	12-20-38	.70	.72	1.44	18⅜	10	34⅝	14⅞
29½	18½	21¼	20	20	Skelly Oil	995,349	$15	50c	12-15-38	1.00	2.27	6.07	34⅜	18½	60⅝	26½
13¾	10½	11⅞	11½	11⅝	Socony-Vacuum	31,206,071	$15	25cSA	3-15-39	.50	1.29	1.82	16⅜	10¾	23¼	13
30⅛	25¼	26⅜	25¾	26	Standard Oil of California	13,004,153	N.P.	30cQ†	3-15-39	1.40	2.22	3.17	34⅞	25⅛	50	27⅛
29⅛	23¼	25¼	24¾	25¼	Standard Oil (Indiana)	15,272,020	$25	25cQ	6-15-39	1.00	1.82	3.66	35½	24¾	50	26½
50⅝	46	..	..	..	Standard Oil of Kansas	106,190	$10	$2	12-8-38	2.00	5.25	6.93	50⅛	32½	43	30⅝
53¼	41⅞	43¼	42½	42⅝	Standard Oil of New Jersey	26,618,065	$25	50c§	12-15-38	§1.50	2.86	5.64	58⅜	39⅜	76	42
66	46	52	51½	52	Sun Oil	2,316,484	N.P.	25cQ	6-15-39	1.00	1.07	3.86	65⅛	45	77½	44½
3¼	2	2⅛	2	2⅛	Superior Oil Corp.	1,388,979	$1	10c	12-28-38	.10	.24	.32	4¼	1⅜	7⅜	1½
48¼	35	38⅞	38⅛	38¼	Texas Corp.	10,876,882	$25	50cQ	7-1-39	2.00	2.13	5.02	49⅝	32⅝	65½	34⅜
5¾	3½	4⅜	4⅛	4⅛	Texas Gulf Producing Co.	888,142	N.P.	10c	6-15-39	.15	.86	.68	5⅞	2⅝	9⅝	2
10⅛	7½	8	7⅞	8	Texas Pacific Coal & Oil	888,236	$10	10c	6-1-39	.40	1.16	1.11	12½	7	16⅝	5⅝
14¼	11¼	12⅞	12¼	12⅜	Tide Water Associated	6,375,253	$10	25c	6-1-39	1.00	1.28	2.08	15⅝	10⅛	21⅝	13⅛
19¾	16¼	17	16⅜	16½	Union Oil of California	4,666,270	$25	25c	5-10-39	1.20	1.47	2.58	22½	17⅛	28¼	17½
23⅝	20⅛	22¾	22¼	22⅝	Union Tank Car Co.	1,177,381	N.P.	30cQ	3-1-39	1.30	1.16	1.70	23½	20	31½	22
3¾	2½	2¾	2⅝	2⅝	Wilcox Oil & Gas	487,568	$5	....	5-10-28	....	.52	.24	3½	1⅝	6¼	1¾

*Payable in 3½ per cent notes. †Includes extras. ‡One-tenth share $2 preferred stock. §Also 1½ per cent stock dividend. ‖Also right to subscribe to bonds. ¶Also 1 per cent in stock. **Also 2 per cent in stock. —Deficit.

New York Curb Exchange

1939 High	1939 Low	Week ending June 24 High	Week ending June 24 Low	Week ending June 24 Close	Stocks—	Total shares outstanding	Par value	Latest dividend	Payable or last paid	Dividends paid in 1938	Com. sh. earn. 1938	Com. sh. earn. 1937	1938 High	1938 Low	1937 High	1937 Low
9	5½	7	6¾	7	American Republics Corp.	1,308,049	$10	10c	7-11-38	$0.10	—$0.22	$0.27	11¾	5	10	6⅝
7¼	3½	4¼	4⅛	4¼	Bridgeport Machine Co.	270,000	N.P.	$1.25	12-30-37	....	—.14	1.90	10¼	4⅞	21⅜	7
34¾	27¼	32⅜	32⅜	32⅜	Buckeye Pipe Line Co.	200,000	$50	50c	3-15-39	2.00	2.36	4.02	39	22½	51½	36
130	110	114	113¼	114	Chesebrough Mfg. Co.	120,000	$25	$1.50Q†	6-26-39	6.50	5.32	6.73	128	97	112	95½
9¼	5⅞	6¼	6	6⅛	Cities Service (new)	3,704,067	$10	....	6-1-32	....	.23	1.02	11	5⅛	5⅝	1¼
1¼	½	1½	1¼	1½	Cosden Petroleum	462,551	$1	....	.....	....	....	.19	2⅜	⅞	5½	1½
23¾	17½	20	19½	19½	Creole Petroleum	6,975,383	$5	50cSA†	6-15-39	1.00	1.64	1.61	27½	17½	38⅜	20¼
7⅛	5	4⅝	4⅝	4⅝	Darby Petroleum	351,390	$5	25cSA	1-15-39	.50	....	1.36	10¼	5½	18⅝	6½
2⅜	1⅝	2¼	2⅛	2¼	Derby Oil & Refining	263,162	N.P.	....	....	....	—.91	1.34	3½	1½	8⅜	2¼
20	15½	..	..	..	Eureka Pipe Line	50,000	$50	50c	5-1-39	3.00	—.37	—.12	31	16	47½	24½
40	29¼	34	33	33	Gulf Oil Corp.	9,076,202	$25	25cQ	7-1-39	1.00	1.43	3.51	46⅞	33	63⅛	33
69⅜	53	63¼	62	62	Humble Oil & Refining	8,987,840	N.P.	37½c	7-2-39	3.00	3.98	5.22	72⅝	56	87	54⅞
17	14⅝	14⅝	14½	14⅝	Imperial Oil of Canada	26,965,078	N.P.	62½cSA†‡	6-1-39	1.25	.96	.98	19½	14⅛	24¼	14½
7	5⅝	6¼	6¼	6¼	Indiana Pipe Line	300,000	$10	30c	5-15-39	.50	.47	1.03	9⅜	6	15	5⅞
27½	21½	22	21¼	21⅞	International Petroleum	14,324,088	N.P.	1.00†‡	6-1-39	2.50	1.98	....	31¼	21	39½	23½
3½	2¼	2⅝	2⅝	2⅝	Kirby Petroleum Co.	500,000	$1	10c	4-15-38	.10	.14	.17	5	2⅛	8⅜	2⅝
9½	7⅛	9	8⅞	9	Lone Star Gas	5,553,747	N.P.	20c	4-20-39	.60	.88	1.14	10⅜	6⅝	14¼	5¼
7¾	4⅞	5¾	5½	5½	Louisiana Land & Exp.	2,977,449	N.P.	10cQ	3-15-39	.45	.45	.58	9⅜	6½	15¼	6¾
17	15	..	..	..	Margay Oil Corp.	149,943	N.P.	25cQ	4-10-39	1.00	2.28	3.26	24	16	33½	17
8¾	7	7⅜	7¼	7¼	Midwest Oil Co.	998,474	$10	50c	12-15-38	1.00	.93	1.14	9¾	6⅝	14⅝	6¾
5½	4⅞	..	..	..	Mountain Producers	1,593,584	$10	30cSA	6-15-39	.60	.62	.76	5¾	4½	7⅞	4¾
13¼	11¼	11½	11⅜	11½	National Fuel Gas	3,810,183	N.P.	25cQ	4-15-39	1.00	.84	.96	14⅝	11½	19½	12
8½	7¼	8⅛	8	8	National Transit	509,000	$12.50	35c	6-15-39	.75	.88	1.19	9¼	6½	12½	7¼
1⅜	1½	1⅝	1½	1½	New Mexico and Arizona	1,000,000	$1	1c	12-1-37	....	.02	.02	2⅝	1½	5	1⅛
4⅞	4	..	..	..	New York Transit	100,000	$5	15c	4-15-39	.25	.16	.49	4½	3½	5⅝	3⅞
6	4½	..	..	..	Northern Pipe Line	120,000	$10	15c	6-1-39	.35	.24	.78	6	4	12¾	5¾
7⅝	4¼	6	5⅝	5⅞	Pantepec Oil	2,857,000	$1	....	.....	....	....	....	7¾	3½	9⅝	2¾
2¾	1¼	1¾	1¾	1¾	Root Petroleum Co.	336,045	$1	25c	2-1-37	....	.17	—.17	4½	1⅝	12¾	2
3	2⅛	2⅛	2	2⅛	Ryan Consolidated	298,931	N.P.	....	.....	....	.29	.46	4	2⅛	6½	2¼
4	3½	..	..	..	Southern Pipe Line	100,000	$10	15cSA	3-1-39	.30	—.27	.85	5⅝	3¼	7¼	3⅞
34⅞	27¾	30	29½	29½	South Penn Oil	1,000,000	$25	37½cQ	3-31-39	1.75	1.44	4.64	39	28¾	56	35
19¾	17	..	..	..	Southwest Penna. Pipe Lines	35,000	$50	50cQ	7-1-39	2.00	—.41	.95	22¼	16½	42	20
18¾	17¼	18⅛	17⅞	18⅛	Standard Oil of Kentucky	2,604,790	$10	25c	6-15-39	1.25	1.45	1.60	18¾	15	21⅛	14¾
11	6	11	9	10⅞	Standard Oil of Nebraska	161,403	$25	25c	3-29-37	....	—.69	—.58	8¾	5½	13¾	8
21¼	17	21	20¾	21	Standard Oil of Ohio	753,740	$25	25c	3-15-39	1.00	1.81	3.67	22¾	16¼	45	16
2⅝	1⅞	2	1⅞	2	Sunray Oil	2,007,076	$1	5c	4-27-39	.05	.23	.42	3¼	2	4⅞	2
4	2⅝	3	3	3	Texon Oil & Land	936,024	$2	10c	6-30-39	.60	.56	.51	5¼	3½	7⅝	2
5½	2½	..	..	..	Transwestern Oil Co.	750,000	$10	....	.....	....	—.12	.48	7⅝	4¼	13⅞	4⅝
3⅜	1⅝	2	1⅞	1⅞	United Gas Corp.	7,818,959	$1	.	.....	....	—.51	.25	5¼	2⅝	13⅜	3

†Includes extras. ‡Payable in Canadian funds. ¶Of which $1 was in preferred stock. —Deficit.

Personal Paragraphs

PETER F. ELMORE, who has had charge of Continental Oil Co.'s stabilization plant in Shiprock, N. M., has been transferred to management of the plant in Ville Platte, La. RAYMOND L. HARPER, assistant at the Shiprock plant, succeeds Mr. Elmore as manager there.

FRANK PHILLIPS, Bartlesville, Okla., chairman of the board of Phillips Petroleum Co., has given $50,000 for use in Boy Scout work in Missouri, it was announced last week by Walter W. Head, president of the National Council, Boy Scouts of America. Mr. Phillips has given $250,000 to youth organizations in the past two years, all in the name of the Frank Phillips Foundation, in New York.

BARNEY FISHER, vice president of the Coronado Corp., Dallas, Tex., is back from Port Aransas, Tex., where he tried his luck at catching tarpon.

"DUDE" CAMERON, superintendent of Gulf Coast operations for Loffland Brothers, drilling contractors, is on vacation in New York and other eastern points.

DR. WILLIAM HARVEY EMMONS, director of the Minnesota State Geological Survey and author of "Geology of Petroleum," was guest of honor at a luncheon given by Tulsa geologists June 26 at the Mayo Hotel.

L. H. MURRAY was general chairman of the annual picnic held last Thursday by Pure Oil Co. employes in Fort Worth, Tex. The outing, lasting through the afternoon and evening, was at Seift's Camp, on Lake Worth.

CHARLES F. URSCHEL, JR., son of the Oklahoma City oil man whose kidnaping in 1933 stirred the country, and MISS BETTY HAILS, of Glendale, Calif., will be married June 30 in Pasadena, Calif., they announced last week. The two met at Stanford University, from which Mr. Urschel has just graduated.

O. D. DONNELL, president of Ohio Oil Co., Findlay, Ohio, gave his annual golf party for business executives June 21 at the Findlay Country Club. Guests numbered almost 300. Special trains and cars conveyed the visitors to Findlay from many points. Heads of many petroleum, transportation and finance companies were present.

DR. I. L. GEORGE, Shreveport, La., of Standard Oil Co. of Louisiana medical department, accompanied by Mrs. George, attended the meeting of the American Association of Industrial Surgeons and Physicians, in Cleveland, Ohio, and then went to New York to take in the World's Fair.

JOHN T. HAYWARD, chief engineer of Barnsdall Oil Co., and WILLIAM G. GREEN, vice president of Seismograph Service Corp., both of Tulsa, have together won a total of 12 cups this year in various sailing regattas for 15½-ft. boats of the snipe class. Mr. Green entered races at Clearwater, Fla.; Fort Worth and Corpus Christi, Tex., and Oklahoma City and won seven cups, three of them being first prizes. Mr. Hayward raced in all but the Clearwater regatta and won five trophies.

DR. M. M. SCHLISSEL, chief chemist and director of Metropolitan Refining Co., Long Island City, N. Y., is making a tour of Oklahoma oil fields. He arrived last Thursday by plane in Tulsa, where he was met by GENE CUNNINGHAM and J. H. BOONE, representatives of the company, who preceded Dr. Schlissel from the East and who are accompanying him on his trip.

D. W. HOVEY, Houston, Tex., vice president of Republic Oil Refining Co., was chosen president of the Gulf Coast Refiners Association, organized by 10 nonintegrated refiners. Other officers are: CORNELIUS KROLL, Southport Petroleum Co., and G. L. ROWSEY, Taylor Refining Co., vice presidents; L. F. ROTHERMEL, Maritime Oil Co., treasurer. An executive secretary is to be named later.

T. J. DONOGHUE, Houston, Tex., executive vice president of Texas Co., was the principal speaker at the dedication of a monument on the site of the first well drilled in the Sour Lake field. Mr. Donoghue is the only man now with the company who was on its payroll when it was organized. He told the story of the company's growth. JUDGE LEAK BEVIL, former county judge of Hardin County, described the progress made by the oil industry in four decades of development in Texas. LEE CONNER, of the Texas Co. safety department, praised the record made by workers in the Sour Lake field.

Do You Remember?

From The Oil and Gas Journal Files

25 YEARS AGO

The best appointed oil company offices in Oklahoma are those of the Dundee Oil Co., at Ardmore. J. M. Critchlow, president of the company, was one of the discoverers of the Healdton pool.

President Lufkin, of the Texas Co., is quoted as saying that the Royal Dutch-Shell combine will become a great factor in the American oil industry.

Because of overproduction in Oklahoma and a weak crude market there is a great and an organized clamor to cease drilling. The Cushing field, steadily increasing in production, is the cause of the trouble.

20 YEARS AGO

News of the death of Sir Boverton Redwood, Bart., noted English petroleum technologist and author, has reached America. A 12-year-old grandson succeeds to the title.

Herbert R. Straight has been made general manager of the Empire Companies, with headquarters in Bartlesville, Okla., succeeding a committee of three, Messrs. Straight, Rossum and Fisher.

Five acres of Burkburnett oil property, containing one well now producing 3,000 bbl. a day, sells for $500,000 to eastern investors. Munger & Verschoyle, of Dallas, Tex., were the sellers.

10 YEARS AGO

Harry J. Morlang has been made vice president of the Oil Well Supply Co. and will have charge of all the company's affairs between the Mississippi River and the Rocky Mountains, including western Canada.

A 70,000,000-cu. ft. gas well is completed by Magnolia Petroleum Co. in Richland Parish, North Louisiana.

The five wells in the Oklahoma City field are producing 16,650 bbl. per day. The field was opened in December 1928.

C. W. McKNIGHT and DAVID J. FLESH, Shreveport, La., geologists, are on a boating trip on the James River, Missouri.

JOHN E. FARRELL, independent operator of Fort Worth, Tex., will leave about July 1 with his family for Colorado, where they will pass the summer.

L. MOSLEY MOFFITT, president of Triangle Drilling Co., Shreveport, La., and chairman of the Ark-La-Tex chapter of the A.P.I., is on a motor tour in the East, accompanied by Mrs. Moffitt.

LEE S. MILLER, petroleum engineer for the Michigan Department of Conservation, arrived in Dallas last week to study Texas proration methods. Michigan began enforcement of its conservation laws June 1.

DAVID R. WILLIAMS, of Williams Brothers Corp., Tulsa, has returned to Guanta, Venezuela, after a short business visit in the United States. He traveled both ways by plane. His company is completing a 100-mile pipe line for Mene Grande Oil Co. between Guanta and Oficina.

J. C. KENNEDY, superintendent of the Cities Service Oil Co. land department, Bartlesville, Okla.; C. E. BEECHER, also of Cities Service, and L. G. RHINEBERGER, gas engineer for Sinclair Prairie Oil Co., both of Tulsa, went to Dallas, Tex., late last week to discuss with officials of the Sun Oil Co. proposed plans for expanding the recycling plant under construction at Grapeland in Houston County, East Texas.

R. W. O'MEARA and M. P. O'MEARA, independent oil operators and producers, Houston, Tex., are on a business and pleasure trip to the Pacific Coast.

C. F. TALBOT, Shreveport, La., oil man, accompanied by his family, has started on a vacation trip which will take them to eastern points and into Canada.

J. A. NEATH, vice president of Humble Pipe Line Co., Houston, Tex., has returned from New York and other eastern points which he visited, accompanied by his family.

JAMES M. WEST, Houston, Tex., chairman of the board of West Production Co., and associated with various other oil interests, has been appointed chairman of the Houston City Planning Commission.

ROGER PARNELL has been assigned to the Lisbon field as agent for the Louisiana Conservation Department. A. L. STEVENS, formerly stationed at Lisbon, has been transferred to Cotton Valley.

HOWELL C. COOPER, retired president of Hope Natural Gas Co., Pittsburgh, Pa., spoke on trends in the natural gas industry at a meeting of the Clarksburg, W. Va., Gas and Oil Men's Club June 22.

"BROWNIE" JOHNSON, veteran California driller, has been engaged as technical adviser in the production of a motion-picture film in which an oil well figures prominently. Mr. Johnson is credited with bringing in more than $20,000,000 worth of oil wells, for others. He is credited with having drilled more than 60 commercially successful wells in California alone during the past 27 years.

Moved to Higher Post

Just the day before the Shell Oil Co., San Francisco, and the Shell Petroleum Corp., St. Louis, were merged recently into the Shell Oil Co., Inc., E. D. Cumming, manager of Shell Petroleum's refinery in Wood River, Ill., was moved up to vice president in charge of manufacturing in the same Shell unit. He retains the higher post of course in the new company, but his office now is in St. Louis.

E. D. CUMMING

Mr. Cumming's rise has been steady since he joined the Shell organization on the Pacific Coast in 1923. He worked in the Long Beach refinery first, then Wilmington, then Dominguez. January 1, 1930, he was transferred to the head office of the Shell Oil Co. in San Francisco as technical assistant. He served in that position until June 1, 1935, when he was promoted to assistant manager of the Dominguez refinery. The next year he was shifted to the Wilmington refinery as assistant manager and then back to the head office as technical assistant. In May, 1937, he was promoted to manager of the Martinez plant. Transfer to Shell Petroleum as manager at Wood River came January 1, 1938. He was made vice president March 31, 1939, to succeed A. E. Lacomble, who took an executive position with Bataafsche Petroleum Maatschappij, a member of the Royal Dutch-Shell group at The Hague, Holland. Mr. Cumming was born in Alabama and received his education in that state, graduating from Alabama Polytechnic Institute in 1922.

EARL E. BOWN, Bradford, Pa., general superintendent of Kendall Refining Co., spoke on "Oil Refining" at the meeting of the Bradford Rotary Club June 19.

GEORGE SOWDEN, independent oil man of Houston, Tex., is taking in the World's Fair in New York. Before returning to Houston, he will visit the Pacific Coast and see the San Francisco fair.

COL. T. H. BARTON, president of Lion Oil Refining Co., El Dorado, Ark., attended the reception, with Mrs. Barton, in Charlottetown, Prince Edward Island, Canada, given for King George and Queen Elizabeth by Lieutenant Governor DeBlois.

BURTON McCOLLUM, head of McCollum Oil Exploration Co., Houston, Tex., was honored in last week's Cities Service "Romance of Oil" program for his work in establishing the position of enemy guns in the World War with the seismograph.

J. H. GIRDLER has resigned as district geologist in the Illinois-Indiana district for Phillips Petroleum Co., and T. W. WHEELER has resigned from the geological department in Bartlesville, Okla., where he was in charge of core-drill work. The two have formed an exploration drilling company with headquarters in Houston, Tex.

F. W. FLOYD, formerly vice president and manager of production for Carter Oil Co. in Tulsa, sailed from New York June 23, accompanied by Mrs. Floyd, to assume new duties in Venezuela. Effective July 1, Mr. Floyd becomes manager of production for Standard Oil Co. of Venezuela. At one time he was geologist for Tropical Oil Co. in Colombia.

L. P. BAYHA, of Union Oil Co. of California, who has been on special work for several years, will retire from active service within the next two weeks and will devote his attention to private business.

C. J. DEAN, engineer of General Petroleum Corp., and N. H. MARSH, manager of the company's export sales, recently entertained M. C. EZINE, of Istanbul, Turkey, and guided him on a tour of southern California fields.

C. B. WHITAKER, in charge of distribution for Cities Service Oil Co., Inc., in the South, arrived in New York last week. He is a member of the staff of GOV. E. D. RIVERS, of Georgia, and went to New York with the governor to participate in the Georgia Day exercises at the World's Fair.

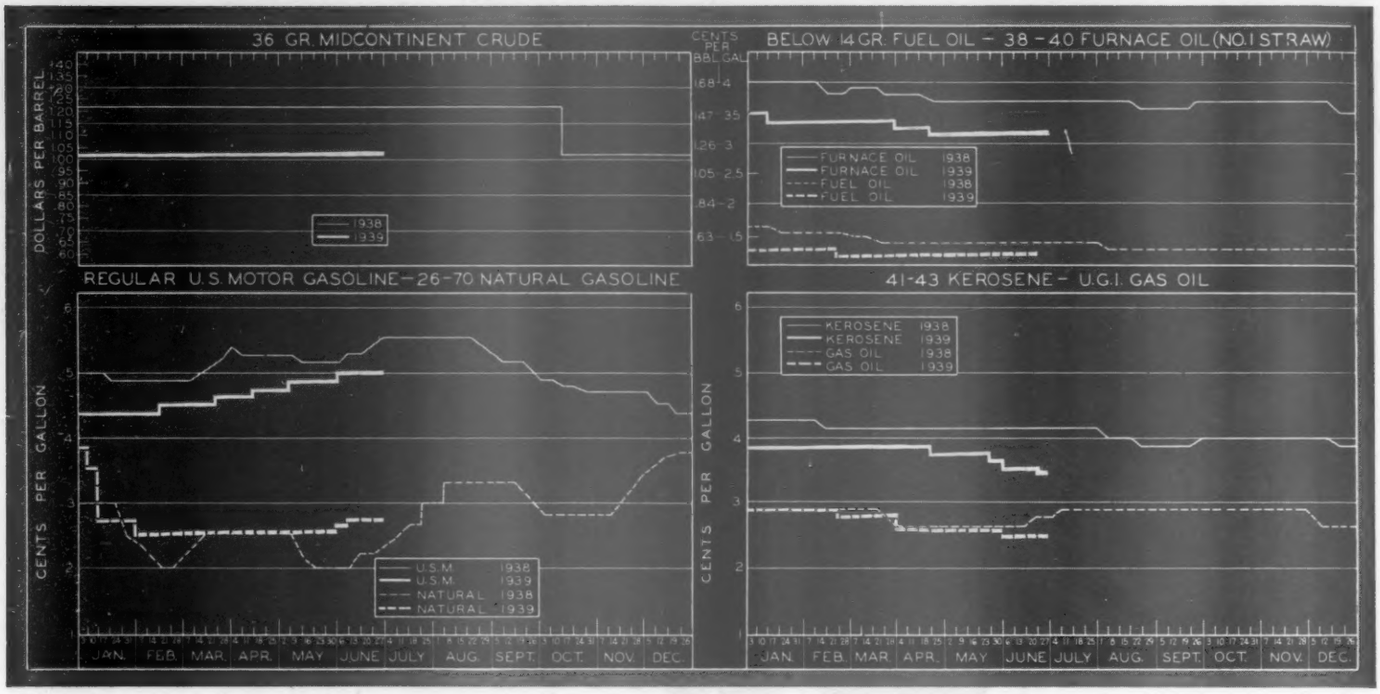
J. S. HAWLEY, assistant purchasing agent of Stanolind Oil & Gas Co., was in charge of the program carried out last Saturday at the annual breakfast dance held by the Purchasing Agents Association of Tulsa and their ladies at the Indian Hills Country Club. Dancing began at 10 p.m. and breakfast was served at 1 a.m. C. D. TAYLOR, assistant purchasing agent of Barnsdall Oil Co., is president of the association.

NORMAN M. DAY has been elected president of Pennzoil Co., succeeding the late L. H. Johnson. Mr. Day, who was born in Los Angeles and educated at Stanford University in Palo Alto, will maintain offices in Los Angeles.

SHIFTS: GUY MABEE, superintendent J. E. Mabee, drilling contractor, from Vandalia, Ill., to Effingham, Ill.; MAURICE MIESSE, manager Phillips Petroleum Co., from Owensboro, Ky., to Evansville, Ind.; RONALD R. RANSOM, scout Skelly Oil Co., from Evansville, Ind., to St. Joseph, Mo.; W. T. FUNK, vice president of the Wash Oil Co., from Tulsa to Dallas, Tex.; R. D. CLARK, Clark & Cowden Drilling Corp., from St. Elmo, Ill., to Concordia, Kans.; GEORGE A. RALPH, engineer B. B. Ralph Estate, from Kansas City, Mo., to Lakeland, Fla.; FRANCIS G. PHILLIPS, engineer E. I. Phillips & Co., from Bolivar, N. Y., to Houston, Tex.; C. F. NICKLOS, superintendent Texas Co., from Craig, Colo., to Denver, Colo.; ROBERT E. ELLIS, manager Kansas & Gulf Co., from Wichita, Kans., to Mattoon, Ill.; JOE LAWRENCE, engineer Halliburton Oil Well Cementing Co., from Wichita, Kans., to Great Bend, Kans.; K. M. McGOLDRICK, McGoldrick Oil Co., from Norman, Okla., to Shreveport, La.

J. E. WAGNER, of Kutten Brothers, with a low gross of 69, won for the second consecutive year the cup awarded by the Burning Oil Distributors Association in the annual golf tournament for the Chicago fuel oil trade. A three-time winner keeps the cup permanently. The Old-Timers cup went to E. W. BERGSTROM, Spencer Petroleum Co.

H. N. PARDEE, division manager of Texas Co., gave the address of acceptance at a banquet sponsored by the Lions Club in Salem, Ill., June 20, when the club presented a bronze plaque and a bronze tablet, commemorative of the company's discovery well in the Salem field. The plaque will be hung in the company's office. The tablet will be placed at the No. 1 Tate well. The presentation speech was given by R. E. BRUBAKER, president of the club, and MAYOR OMAR J. McMACKIN told how oil had transformed the community. Other speakers representing Texas Co. were W. C. NEAL, superintendent, and DON ROUNDS, land superintendent. Representing Central States Pipe Line Co. were W. N. THOMPSON, S. SIMPSON, and H. L. ALEXANDER. Officials of the two organizations were guests of the club at the banquet, which marked the first anniversary of No. 1 Tate.



Representative Mid-Continent Quotations on Crude Oil and Refined Products, Basis Oklahoma (Group 3)

Group 3 Market Dispirited by Failure of Sinclair Advance to Get Support

By T. F. SMILEY

Rosy tints that had brightened the Group 3 market picture were fading this week. Refiners displayed little of the eager hopefulness they evinced when Sinclair Refining Co. June 14 advanced its tank-wagon gasoline prices a half-cent.

Responses by other companies to the Sinclair increase had been prompt, enthusiastic and almost country-wide. But a few major companies did not swing into line. As a result the higher prices had been in effect scarcely a week when Sinclair withdrew its advances in a group of eastern states where Standard of New Jersey and other important refiners were holdouts. It withdrew them too in Ohio, where Standard of Ohio had stood pat. In other areas it made adjustments to meet local conditions. It cut back its price in Texas. Here, however, Gulf, Humble, Magnolia and Texas Co. had just raised their prices 1 cent, and the Sinclair increase was on top of that.

Cutbacks in 10 States

In the 10 states recognized as Standard of Indiana territory a somewhat confused situation appeared. Standard of Indiana had made a series of advances to bring subnormal tank-wagon and dealer prices to normal. Wherever prices were normal originally the new Sinclair prices thus were a half-cent higher than Standard of Indiana's. Standard of Indiana did not join in the general movement to meet the Sinclair advance. So the companies that did meet it found themselves posting a half-cent more than Indiana at normal points. One by one they withdrew their increases at these points to get their prices in line with those of the dominant company.

Refined Oil Market Barometer

Failure of the recent advances in tank-wagon gasoline prices to hold in important areas has dulled market enthusiasm, but mounting demand is preserving a firm tone at prevailing price levels. The high rate of refinery operations and the limited withdrawals from stocks are causing concern. Kerosene is in a seasonal slump. Naturals maintaining their strength.

MID-CONTINENT. Gasoline steady. Kerosene off. Naturals holding. Light fuels soft.

EAST COAST. Gasoline firm, notwithstanding rescinding of tank-wagon advances.

GULF COAST. Gas oils a shade softer. Gasoline firm. Prices unchanged.

CALIFORNIA. Market inactive. All products, including gasoline, weak.

PENNSYLVANIA. Gasoline steady. Kerosene dull. Wax strong.

CHICAGO. Gasoline active. Kerosene slow. Tractor fuels quiet, but steady.

Failure of the Sinclair advance to gain followers expected in the eastern and Gulf Coast districts, along with inability of the advances by other companies in parts of Standard of Indiana territory to hold their ground, checked the tide of optimism among Oklahoma refiners. The higher tankcar prices that looked so real in prospect had turned out to be a mirage.

A marked increase in offerings of gasoline did not help matters. Some inventories were giving their owners concern, and experienced buyers were reported to be getting concessions of an eighth-cent from ruling prices.

The spot gasoline market, which had been dragging, exhibited scattered signs of minor improvement. Orders were coming in at a slightly accelerated rate from jobbers as Independence Day approached, with its expected heavy draft on filling stations. A few sales managers, discouraged by the lack of support accorded Sinclair's undertaking, but trying to find a ray or two of sunshine, expressed belief that the higher tankcar prices so sorely needed by refiners might be realized yet through sheer force of demand. Monday of this week Standard of Indiana advanced to normal its few remaining subnormal tank-wagon and dealer prices in Wisconsin.

Naturals Hold Their Strength

Natural gasoline showed no symptoms of surrendering any of the strength it has been displaying in recent weeks. Adding to its firmness was an export inquiry for a cargo of 18- to 20-lb. material for September delivery. Inquiries are in hand also for substantial quantities of similar grade, for delivery through July, August, and September, wanted for blending with oversea shipments of crude. Contract movement to the Gulf Coast for coastwise or export shipment or for use by refiners in that area continued steady. Jobber demand was satisfactory, with the spot market well sold up. Intercompany buying was being done to fill special needs.

Kerosene was weaker, with prices falling. Heating oils and tractor fuels were slow. Lubricant movement was fair.

Effort to Improve Tank-Wagon Price in East Unsuccessful

By H. STANLEY NORMAN

NEW YORK, June 26.—The effort to elevate motor-fuel tank-wagon prices in the northeastern section of the country, including Pennsylvania, Maryland, Washington, D. C., New Jersey, New York, and the New England section had apparently failed last week. The failure in this area was attributed to lack of action on the part of Socony-Vacuum Oil Co., Atlantic Refining Co., Sun Oil Co., and marketing subsidiaries of Standard Oil Co. of New Jersey, plus the early retirement from original advances by Texas Co. and Shell Union Oil Co.

In addition to dropping back from the originally posted half-cent advances in Delaware, Pennsylvania, New Jersey, Maryland, and the District of Columbia, Texas Co. lowered tank-wagon prices in 10 middle western states, meeting current postings of Standard Oil Co. of Indiana. The middle western reductions were not to the full extent of the June 14 half-cent advance in all cases, since Standard of Indiana had raised some of the subnormal points by various amounts during the same week. Texas Co. also returned to earlier postings in Louisiana, where Standard Oil Co. of Louisiana failed to meet the half-cent advance on June 14 instituted in its 42 marketing states by Sinclair Refining Co. and other Consolidated Oil Corp. marketing subsidiaries.

The northeastern market, however, is in slightly improved position over the start of June, due to moderate advances in tankcar and tank-wagon motor-fuel prices, ranging mostly around one to three-tenths of a cent per gallon in most of Socony-Vacuum marketing territory, including New York and New England.

The full advance of a half-cent per gallon appeared well established at the end of last week in Standard Oil Co. of Kentucky marketing territory and in Continental Oil Co. Rocky Mountain district. Standard Oil Co. of Louisiana announced a half-cent tank-wagon advance, effective June 6, at Bristol, Tenn., making the undivided dealer posting for regular gasoline at that point 16.5 cents per gallon, including 8 cents for federal and state taxes.

The rate of refinery operations is not expected to show much change from the all-time record runs to stills established for the week ended June 10. In the face of record refinery operation for the first full week in June, liquidation of motor-fuel stocks normally at a rate of 500,000 to more than 1,000,000 bbl. per week at this season of the year was down only 59,000 bbl. for the 7 days ending June 17. The rate of refinery operation during the week ended June 10 was partially predicated on the withdrawal of 3,255,000 bbl. of crude from storage during the week without any compensating decline in production.

With only a fraction of the middle-of-June motor-fuel advance of a half-cent realized in most of the big eastern consuming territory, fear is again expressed in some quarters that the difference will be pared from the price of crude oil. Others are still hopeful refinery operations will be checked and a more substantial liquidation of motor-fuel stocks will yet permit a stronger product market to prevail during the heaviest consuming months of July and August.

The refinery and terminal tankcar market in New York is reported on firm ground at 6¼ to 6⅜ cents for 65-octane material. These prices are quoted by most of the suppliers of spot demand, and they represent an advance of an eighth to a quarter of a cent over the market a month ago.

The only weak spot reported in the North Atlantic Coast tankcar market was around Boston, where many suppliers are offering 65-octane motor fuel at 6 cents per gallon, although a few are quoting prices comparable to those prevailing in New York and Philadelphia.

Several dealers in northern and western Pennsylvania have dropped their service-station prices to levels prevailing in Philadelphia. Most of the company-operated and leased stations in northern and western Pennsylvania are now quoting 18 cents per gallon for premium, 16 cents for regular, and as low as 13½ to 14 cents for third grade. The prices are comparable to those prevailing for several weeks in Philadelphia. Prior to the end of last week, most stations outside the metropolitan areas of Philadelphia were posting 19 cents for premium and 17 cents for regular. The Pennsylvania State tax of 4 cents and the federal tax of 1 cent are included in the service-station quotations.

Motor-fuel demand in this territory is increasing each week. Casual observation on the highways leading to New York and in nearby resort centers reveals a strikingly high percentage of out-of-state license plates, indicating that travel to the New York World's Fair is approaching midsummer proportions. Most of the out-of-state license plates in evidence on the eastern highways are from New England, the Middle West, and Southwest.

Most of the eastern and Gulf Coast refining companies interrogated declare that their individual gasoline stocks are no more than adequate to meet the anticipated demand over the summer and to permit a safe margin of operation in the event of a prolonged and mild fall season such as has prevailed in this territory during the past 2 years.

Conditions in the fuel-oil market are approximately unchanged from the preceding week. Bunker C fuel oil remains firm and unchanged at $1.05 at New York, Boston, and Philadelphia terminals. Most Gulf Coast refiners are quoting 80 cents per barrel for cargoes moving coastwise to North Atlantic terminals. There has been some talk of a slightly easier tone to the Gulf Coast Bunker C fuel-oil cargo market, but the rumors have not been manifested in confirmable reports of actual business.

Light fuels, including kerosene and No. 2 and No. 4 fuel oils, are suffering from normal slack seasonal demand, but prices generally are holding unchanged on these products. Most eastern refiners are quoting 4¼ cents on kerosene, although reports were current in New York that one or two Gulf Coast shippers are willing to accept business at an eighth to a quarter of a cent off the previous price of 3⅝ cents prevailing there for coastwise cargo movement. One or two Pennsylvania refiners dipped their kerosene prices an eighth of a cent last week, quoting 4⅞ cents against 5 cents previously asked. No. 2 and No. 4 fuel oil is held by refiners in the New York district at 3¾ cents, but demand is light in this season of normal stock accumulation in preparation for the fall and winter burning season. Some Gulf Coast refiners are reported willing to accept business on No. 2 fuel oil at 3 cents per gallon, although a majority are still quoting 3⅛ to 3¼ cents per gallon for cargo quantities.

There has been no change in the western Pennsylvania refining market for lubricating stocks. Shipping instructions against contracts are brisk at current quotations, and most plants report movement is in close balance with current production.

The wax market is also unchanged at previous levels, ranging from 2.9 to 5 cents for scale grades.

A. P. I. Weekly Refinery Statistics

Week Ending June 24, 1939

	Capacity reporting (per cent)	Daily crude runs (bbls.)	Total gasoline stocks	Gas oil and fuel oil stocks
East Coast	100.0	576,000	21,802,000	8,011,000
Appalachian	85.9	108,000	3,310,000	668,000
Indiana, Illinois, and Kentucky	89.5	473,000	13,152,000	5,551,000
Oklahoma, Kansas, and Missouri	81.6	278,000	7,280,000	4,151,000
Inland Texas	50.3	120,000	1,581,000	2,095,000
Texas Gulf	89.5	819,000	9,215,000	9,222,000
Louisiana Gulf	97.3	132,000	2,526,000	2,405,000
North Louisiana and Arkansas	55.0	43,000	523,000	870,000
Rocky Mountains	54.2	44,000	1,628,000	708,000
California	90.0	495,000	15,596,000	95,182,000
Total reported	85.8	3,088,000	76,613,000	128,863,000
Estimated unreported	.....	342,000	5,120,000	2,960,000
*Estimated total	.....	3,430,000	81,733,000	131,823,000
*Estimated total previous week	.....	3,480,000	82,657,000	131,835,000
*June 25, 1938	.....	3,129,000	82,054,000	136,949,000

*Bureau of Mines, currently estimated.

Stocks of Crude Oil in the United States

(BUREAU OF MINES ESTIMATE)

Week ending June 17, 1939	274,852,000 barrels
Week ending June 10, 1939	274,692,000 barrels
Week ending June 18, 1938	295,931,000 barrels

Figures do not include stocks of heavy, unrefinable California crude.

Retail Oil Markets

Tank-wagon and filling station prices on gasoline and kerosene furnished by the larger marketing firms

Prices as of June 27, 1939

Taxes

The gasoline quotations given in the following tables include the 1-cent federal tax, as well as state, county, and city taxes. The gasoline is the regular or standard grade. In most areas lower grades and a premium grade also are available.

Standard Oil Co. (Indiana)

	Gasoline Tank-Wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Chicago, Ill.	15.1	13.1	4.0	10.0
Decatur	15.1	13.6	4.0	10.0
Joliet	15.1	13.6	4.0	10.0
Peoria	15.1	13.6	4.0	10.0
Quincy	14.9	13.4	4.0	9.8
Davenport, Ia.	15.1	13.6	4.0	‡10.0
Des Moines	14.9	13.4	4.0	‡9.8
Mason City	15.3	13.8	4.0	‡10.2
Duluth, Minn.	16.9	15.4	5.0	10.8
Mankato	16.5	15.0	5.0	9.4
Minneapolis	16.5	15.0	5.0	10.4
LaCrosse, Wis.	16.5	15.0	5.0	10.4
Green Bay	16.9	15.4	5.0	10.8
Milwaukee	16.3	14.8	5.0	10.2
Detroit, Mich.	13.6	12.1	4.0	7.1
Grand Rapids	14.5	13.0	4.0	9.7
Saginaw	15.8	13.6	4.0	9.3
Evansville, Ind.	16.6	15.1	5.0	†10.5
Indianapolis	16.8	15.3	5.0	†10.7
South Bend	17.1	15.6	5.0	†10.0
Fargo, N. D.	16.7	15.2	4.0	11.6
Huron, S. D.	17.0	15.5	5.0	10.9
Kans. City, Mo.*	14.4	12.9	4.0	8.0
St. Louis*	14.7	13.2	4.0	8.0
St. Joseph	14.4	8.9	4.0	7.9
Wichita, Kans.	13.9	11.6	4.0	7.4

*State tax 2 cents, 1-cent city tax and 1-cent federal tax. †Does not include 4-cent state tax. ‡Does not include 3-cent state tax.

Exclusive of state general sales taxes.

Discounts to commercial consumers: On purchases per month off tank-wagon prices: 1,000 gallons or more, 1.5 cents off; minimum delivery 25 gallons.

Stanolex Fuel Oil in Chicago

Effective June 1, 1939, f.o.b. Chicago tank-wagon prices: Standard range oil, 1-99 gallons, 9 cents; 100-149 gallons, 8 cents; 150 gallons and over, 7.5 cents. Stanolex fuel oil No. 1, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex furnace oil, 1-149 gallons, 8.25 cents; 150-399 gallons, 7.25 cents; 400 gallons and over, 6.75 cents. Stanolex Grade A, 1-399 gallons, 5 cents; 400 gallons and over, 4 cents. Stanolex Grade B, 1-799 gallons, 5 cents; 800 gallons and over, 4 cents. Stanolex Grade C, 1-999 gallons, 4.25 cents; 1,000 gallons and over, 3.25 cents.

Ohio

STANDARD OIL CO. OF OHIO

	Gasoline Tank-wag. con'r.	Gasoline Dlr. vided	Gasoline Inc. tax	Kero. tank-wag.
Ohio points	16.0	15.0	5.0	*13.0

*Includes state tax of 1 cent.

Atlantic Coast District

STANDARD OIL CO. OF NEW JERSEY

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Atl'tic City, N. J.	10.9	12.7	4.0	7.0
Newark	10.9	12.7	4.0	7.0
Annapolis, Md.	12.85	14.35	5.0	9.5
Baltimore	12.25	13.75	5.0	7.0
Cumberland	13.65	16.15	5.0	10.0
Wash'gton, D. C.	10.50	12.0	3.0	9.5
Danville, Va.	14.45	16.95	6.0	12.9
Norfolk	13.25	15.75	6.0	11.5
Petersburg	13.55	16.05	6.0	11.7
Richmond	13.55	16.05	6.0	10.7
Roanoke	14.75	17.25	6.0	11.0
Charles'n, W. Va.	14.05	16.55	6.0	12.6
Parkersburg	13.35	14.85	6.0	11.2
Wheeling	14.35	15.75	6.0	12.2
Charlotte, N. C.	15.40	17.90	7.0	11.8
Hickory	15.95	18.45	7.0	12.3
Mt. Airy	15.80	18.50	7.0	12.2
Raleigh	15.15	17.65	7.0	11.5
Salisbury	15.45	17.95	7.0	11.9
Charleston, S. C.	14.25	16.75	7.0	10.6
Columbia	15.25	17.75	7.0	11.6
Spartanburg	15.95	18.45	7.0	12.4

Price basis to Essolene undivided dealers: Dealer tank-wagon price less .5 cent per gallon. Price basis to commercial consumers, effective March 8, 1937, in Maryland, District of Columbia, and in Arlington and Fairfax counties in Virginia; and March 12 in New Jersey: To contract accounts purchasing at least one full compartment at time by hose connection, on yearly purchases: From 2,500 to 100,000 gallons, consumer tank-wagon price at time and place of delivery; 100,000 gallons per year, consumer tankcar price plus .5 cent per gallon. Consumer tank-wagon price generally will be equivalent to dealer tank-wagon price less .5 cent per gallon.

Effective January 16, 1939, in North Carolina the commercial consumer schedule became as follows: Single deliveries of 50 gallons or more, consumer tank-wagon price. Single deliveries of less than 50 gallons, 4 cents per gallon over consumer tank-wagon price. Generally the posted consumer tank-wagon price will be equivalent to the dealer price, less .5 cent per gallon. The above policy also applies in South Carolina effective January 23, 1939.

Discounts for kerosene, 1 cent off tank-wagon price for 25 gallons or more under contract (contract not necessary in Baltimore) except no discount in New Jersey.

Southern District

STANDARD OIL CO. (KENTUCKY)

	Gasoline Cons'r. tank-wag.	Gasoline Net dlr.	Gasoline Inc. tax	Kero. tank-wag.
Atlanta, Ga.	20.5	17.5	7.0	9.0
Augusta	19.5	16.5	7.0	9.0
Macon	18.5	15.5	7.0	10.0
Savannah	18.5	15.5	7.0	8.0
Birmingham, Ala.	20.5	17.5	8.0	8.5
Mobile	20.5	17.5	9.0	8.5
Montgomery	21.5	18.5	9.0	10.5
Jackson, Miss.	18.5	15.5	7.0	9.5
Vicksburg	18.5	15.5	7.0	9.0
Jacksonville, Fla.	19.5	16.5	8.0	8.0
Miami	19.5	16.5	8.0	8.0
Pensacola	20.5	17.5	9.0	8.0
Tampa	19.5	16.5	8.0	8.0
Lexington, Ky.	19.0	16.0	6.0	10.0
Covington	17.5	14.5	6.0	9.5
Louisville	18.0	15.0	6.0	9.0
Paducah	18.0	15.0	6.0	9.0

Price basis to tank-wagon consumers: Effective January 4, 1937; 3 cents per gallon below tank-wagon price.

Montgomery, Ala., has a county tax of 1 cent per gallon, and a city tax of 1 cent per gallon on gasoline, in addition to state tax and 1 cent per gallon on kerosene. Mobile, Ala., has a city gasoline tax of 2 cents per gallon; Birmingham, Ala., has a city gasoline tax of 1 cent per gallon; Pensacola, Fla., has a city gasoline tax of 1 cent. All are included in the table.

Pennsylvania and Delaware

ATLANTIC REFINING CO.

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Philadelphia, Pa.	12.0	13.5	5.0	10.0
Pittsburgh	13.0	14.5	5.0	10.5
Allentown	12.5	14.0	5.0	10.5
Erie	13.0	14.5	5.0	10.0
Scranton	12.5	14.0	5.0	10.5
Altoona	13.0	14.0	5.0	10.5
Dover, Del.	...	14.0	5.0	10.5
Wilmington	...	13.5	5.0	9.75

Price basis to undivided dealers, dealer tank-wagon price less .5 cent per gallon.

New York and New England

SOCONY-VACUUM OIL CO., INC.

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
Albany	11.7	14.0	5.0	7.00
*Met. N. Y.:				
Manhat., Bronx.	11.8	13.0	5.0	6.75
Queens, Br'klyn	11.8	13.0	5.0	6.75
Staten Island	11.8	13.0	5.0	6.75
Buffalo	12.4	11.8	5.0	7.50
Rochester	12.6	14.0	5.0	7.75
Syracuse	12.3	13.5	5.0	7.25
Boston	10.7	12.25	4.0	6.50
Portland, Me.	11.7	13.7	5.0	6.75
Manchester, N. H.	12.4	14.5	5.0	7.25
Burlington, Vt.	12.2	14.5	5.0	7.25
Springfield, Mass.	11.4	13.3	4.0	6.00
Worcester	11.4	12.5	4.0	7.00
Hartford, Conn.	11.1	13.2	4.0	6.50
New Haven	11.0	12.25	4.0	6.00
Providence, R. I.	10.7	12.50	4.0	6.25

*Does not include 2 per cent city sales tax which is calculated on basis of net retail price exclusive of state and federal taxes. Metropolitan New York prices are undivided dealer prices; others are split dealer.

Effective February 15, 1939, the company changed its commercial consumer policy in New York and New England points for tank-wagon delivery to the following: Annual purchases 10,000 gallons and under, tankcar price plus 2 cents per gallon; annual purchases 10,000 gallons up to 50,000 gallons, tankcar price plus 1.5 cents per gallon; annual purchases 50,000 to 200,000 gallons, tankcar price plus 1 cent per gallon; annual purchases 200,000 gallons and over, tankcar price plus one-half cent per gallon. Private consumers pay undivided dealer price, plus 2 cents per gallon. Private consumers receiving full compartment deliveries of at least 200 gallons receive a discount of one-half cent per gallon.

Pacific Coast Territory

STANDARD OIL CO. OF CALIFORNIA

	Gasoline Tank-truck	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
San Francisco	17.5	18.5	4.0	11.5
Los Angeles	17.0	18.0	4.0	10.0
Fresno, Calif.	18.5	19.5	4.0	12.5
Phoenix, Ariz.	21.5	22.5	6.0	*17.5
Reno, Nev.	20.5	21.5	5.0	13.5
Portland, Ore.	20.0	21.0	6.0	13.5
Seattle ,Wash.	20.0	21.0	6.0	†13.75
Spokane	21.5	22.5	6.0	†16.75
Tacoma	20.0	21.0	6.0	†13.75

*Includes 5-cent state tax. †Includes .25-cent state tax.

Discounts to dealers: On gasoline, off tank-wagon price, to 100 per cent dealers, 3 cents. To commercial consumers: On tank-wagon price; on single deliveries of 40 gallons and over, advance quantity discount extended at time of delivery, 3 cents. Service station schedule applies on single deliveries less than 40 gallons. On kerosene in tankcar, transport truck and trailer delivery, 3 cents off tank-wagon price; plant deliveries to jobbers, 2.5 cents below tank-wagon.

March 18, 1939, split dealer discount was canceled.

Rocky Mountain District

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Gasoline Dlr.	Gasoline Incl. tax	Kero. tank-wag.
Denver, Colo.	15.5	...	5.0	11.5
Grand Junction	18.0	...	5.0	15.0
Pueblo	16.0	...	5.0	9.0
Casper, Wyo.	17.0	...	5.0	11.5
Cheyenne	15.0	...	5.0	13.0
Billings, Mont.	18.0	...	6.0	13.0
Butte	19.5	...	6.0	15.5
Great Falls	19.0	...	6.0	15.5
Helena	20.0	...	6.0	15.5
Salt Lake, Utah	17.0	17.0	5.0	16.0
Boise, Idaho	20.1	20.1	6.0	18.0
Twin Falls	20.6	20.6	6.0	18.0
Albu'que, N. M.	17.0	17.0	6.5	10.0
Roswell	15.5	15.5	6.5	8.0
Santa Fe	17.5	17.5	6.5	10.0

*Includes city tax of .5 cent. †Includes state tax of 1 mill.

Tank-wagon represents price to consumers. Dealer represents price to dealers. If no dealer price is quoted, the tank-wagon price applies to all classes of trade.

Central South District

STANDARD OIL CO. OF LOUISIANA

	Gasoline Cons. tank-car	Gasoline Dlr. tank-wag.	Gasoline Inc. tax	Kero. tank-wag.
New Orleans, La.	16.75	19.25	*10.0	†11.0
Baton Rouge	14.75	17.25	8.0	‡10.5
Alexandria	14.75	17.25	8.0	‡12.5
Lafayette	15.00	17.50	8.0	‡11.0
Lake Charles	14.75	17.25	8.0	‡12.5
Shreveport	13.50	16.00	8.0	‡11.0
Knoxville, Tenn.	18.00	20.50	8.0	14.5
Memphis	16.00	18.50	8.0	11.0
Chattanooga	17.50	19.00	8.0	14.0
Nashville	17.00	19.50	8.0	12.0
Bristol	18.25	17.00	8.0	13.0

Essolene at dealer price less .5 cent per gallon to undivided dealers.

*Includes 2-cent parish tax. †Includes 1-cent parish tax and 1-cent state tax. ‡Includes 1-cent state tax.

Price basis to commercial consumers: Effective May 15, 1937, deliveries of 50 gallons or more in one territory take posted consumer tank-wagon price. Accounts taking deliveries of less than 50 gallons at one time pay posted consumer tank-wagon price plus 4 cents per gallon. Generally, the posted consumer tank-wagon price will be equivalent to the dealer price less .5 cent per gallon. Kerosene prices include 1-cent state tax.

Effective February 24, 1939, the company reestablished in New Orleans the commercial consumer policy on motor fuel effective in the rest of the state.

Effective December 12, 1938, the company revised its commercial consumer policy on motor fuel in New Orleans, as follows: Single deliveries of less than 50 gallons, consumer tankcar plus 2 cents per gallon; 50 to 199 gallons, consumer tankcar plus 1 cent per gallon; 200 gallons and over, consumer tankcar plus .5 cent per gallon.

Nebraska

STANDARD OIL CO. OF NEBRASKA

	Gasoline Tank-Wag.	Gasoline Dlr.	Gasoline Inc. tax	Kero. tank-wag.
Omaha	17.5	16.0	6.0	10.3
McCook	18.0	15.0	6.0	9.0
Norfolk	17.0	15.9	6.0	9.0
North Platte	18.3	16.8	6.0	11.1
Scottsbluff	18.0	15.9	6.0	11.0

Discounts to commercial consumers for tank-wagon deliveries covered only by standard commercial consumers contract, effective January 1, 1935.

Oklahoma and Arkansas

CONTINENTAL OIL CO.

	Gasoline Tank-wag.	Gasoline Includes tax	Kero. tank-wag.
Texarkana, Ark.	14.0	5.0	8.0
Fort Smith	14.0	5.0	7.5
Little Rock	16.75	7.5	8.0
Muskogee, Okla.	13.0	5.0	7.0
Oklahoma City	13.0	5.0	6.5
Tulsa	13.0	5.0	7.0

The tank-wagon price is the price to all classes of trade.

Texas

	Gasoline Tank-wag.	Gasoline Serv. sta.	Gasoline Inc. tax	Kero. tank-wag.
Dallas, Tex.	14.0	18.0	5.0	7.0
Fort Worth	14.0	18.0	5.0	8.0
Houston	14.0	18.0	5.0	8.0
San Antonio	14.0	18.0	5.0	8.0

Naphtha

STANDARD OIL CO. (INDIANA)

	Tank-wagon*
Oleum spirits	15.7
V.M.&P. naphtha	16.0
Cleaners' naphtha	15.0
Stanisol	15.0

*Prices include 3-cent Illinois tax but not 1-cent federal tax or 2 per cent retail occupational tax.

Prices f.o.b. Chicago. Each price subject to discount of 1 cent per gallon for 150-gallon lots if covered by contract.

Canada*

3-Star Imperial Gasoline
IMPERIAL OIL, LTD.

	Tank-wag.	Inc. tax	Kero. tank-wag.
Halifax, N. S.	23.5	10.0	17.5
St. John, N. B.	23.5	10.0	17.5
Montreal, Que.	22.0	8.0	14.5
Toronto, Ont.	23.0	8.0	15.5
Hamilton, Ont.	23.0	8.0	15.5
Winnipeg, Man.	26.5	7.0	20.5
Brandon, Man.	28.0	7.0	22.9
Regina, Sask.	26.0	7.0	22.0
Saskatoon, Sask.	28.3	7.0	24.9
Edmonton, Alta.	26.5	7.0	21.5
Calgary, Alta.	23.5	7.0	19.0
Vancouver, B. C.	23.0	7.0	23.0

*Imperial gallon used in Canada.

Divided dealers pay tank-wagon prices. Discount to undivided dealers, 1 cent below tank-wagon price. In maritime provinces both divided and undivided dealers pay tank-wagon price.

Tank-Wagon Changes

Standard Oil Co. of Louisiana June 6 advanced dealer tank-wagon gasoline .5 cent in Bristol.

Atlantic Refining Co. June 16 advanced dealer tank-wagon gasoline 1 cent in Pittsburgh; .5 cent in Erie and Altoona.

Standard Oil Co. (Indiana) June 26 advanced dealer and tank-wagon gasoline .4 cent in Milwaukee.

Turner Valley Costs

CALGARY, Alta.—At a hearing before the McGillivray Royal Commission, T. E. Burns, accountant for Royalite Oil Co., estimated crude-production costs for the four Sterling Pacific wells at $1.01 per barrel over a 10-year period. Drilling costs per well ranged from $132,500 to $158,000. The estimate included provision for use of gas lifts by 1940.

Harold L. Fry, Oil City, Pa., petroleum engineer, has gone to Caracas, Venezuela, for Socony-Vacuum Oil Co., Inc. Mr. Fry spent 11 years in South America with Standard Oil Co. of New Jersey.

Prices of Refined Products

All quotations f.o.b. plant in cars for interstate or export movement except as otherwise noted

Prices as of June 27, 1939

The following quotations are exclusive of the federal excise taxes of 1 cent a gallon on gasoline and 4 cents a gallon on lubricating oils.

Refinery Gasoline

OKLAHOMA (Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
64-66 375	.04¼	.04½
68-70 360	.05	.05¼

NORTH TEXAS—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400	.04¼	.04⅜
64-66 375	.04¼	.04½

NORTH LOUISIANA (Ark. and N. La. delivery)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05¼

ARKANSAS (Ark. and N. La. del.)—

U. S. Motor grades:		
62 octane and below	.04½	.04⅝
67-69 octane	.04⅞	.05

CHICAGO (Based on Group 3)—

U. S. Motor grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
60-62 400 grades:		
62 octane and below	.04¼	.04⅜
63-66 octane	.04½	.04⅝
67-69 octane	.04¾	.04⅞
70-72 octane (regular)	.05	.05⅛
64-66 375	.04½	.04½
68-70 360	.05	.05¼

PENNSYLVANIA (Inland refineries)—

58-60 U. S. Motor:		
Below 60 octane	.04½	.05
65 octane	.06¼	.06¾
68-70 octane		.06½

CALIFORNIA (domestic movement)—

54-58 U. S. Motor	.06½	.08
58-60 400, 65 oct. and higher	.07½	.09

EAST COAST (domestic)—

U. S. Motor, 65 and above:		
*New York (Bayonne)	.06	.06¼
Philadelphia	.06	.06¼
Baltimore	.06	.06¼
Charleston, S. C.	.06½	.06¾

*All grades of gasoline ⅛ to ¼ cent less for barge shipments. New York Harbor prices are for New York and New England delivery. Prices for New Jersey delivery ¼ cent lower.

GULF COAST (domestic)—

U. S. Motor grades:		
Below 60 octane	.04¼	.04⅜
60-64.9		.04½
65 octane and higher	.05⅛	.05¼
68-70	.05⅛	.05½

Naphtha

PENNSYLVANIA (Inland refineries)—

52-56 450 (blending)	.04¼	.04½

Natural Gasoline

OKLAHOMA (Group 3)—

Grade 26-70		.02¾
Grade 18-55		.03¼

NORTH TEXAS—

Grade 26-70		.02¾
Grade 18-55		.03¼

CALIFORNIA—

75-85 375-390	.06	.06¾

NORTH LOUISIANA (Ark. and N. La. delivery)—

Grade 26-70		.03⅛

Tractor Fuel

OKLAHOMA (Group 3)—

40-42 gr., 315-325 l.b.p., 110-flash, 540-550 e.p.	.03⅜	.03⅝
41-43 gr., 300-320 l.b.p., 110-125 flash, 500-520 e.p.	.03½	.03¾
46-48 gr., 210-230 l.b.p., 480-max., e.p.	.03⅞	.04⅛

Kerosene

(All kerosene water white)

OKLAHOMA (Group 3)—

41-43	.03⅜	.03⅝
42-44	.03⅝	.03⅞

NORTH TEXAS—

41-43	.03⅜	.03⅝

NORTH LOUISIANA (Ark. and N. La. delivery)—

41-43	.03¾	.04

ARKANSAS (Ark. and N. La. del.)—

41-43		.04¼

PENNSYLVANIA (Inland refineries)—

45	.05	.05⅛
46	.05⅛	.05¼
47	.05¼	.05⅜

CHICAGO (Based on Group 3)—

41-43	.03¾	.03⅞
42-44	.03⅞	.04

CALIFORNIA (Pac. Coast market)—

38-43 high burning test	.04¾	.05¾

NEW YORK (Bayonne, N. J.)—

41-43		04⅜

***GULF COAST (domestic)—**

41-43		.03½

*Barge price ⅛ cent lower.

Furnace Oil

OKLAHOMA (Group 3)—

Range oil	.03⅜	.03½
No. 1 prime white, 38-42	.03½	.03⅝
No. 1 straw, 38-40	.03½	.03¼
No. 2 straw, 32-36	.02¾	.03
No. 2 dark, 32-36	.02⅝	.02¾
No. 3 zero to 15, 28-32	.02½	.02⅝
No. 3, 15 and above, 28-32	.02⅝	.02½

NORTH TEXAS—

No. 1 prime white, 38-42	.03⅛	.03⅜
No. 1 straw, 38-40	.03⅛	.03¼

NORTH LOUISIANA (Ark. and N. La. delivery)—

No. 2, 32-36		.03

ARKANSAS (Ark. and N. La. del.)—

No. 2, 32-36		.03⅝

CHICAGO (Based on Group 3)—

Range oil	.03⅝	.03⅞
No. 1 prime white, 38-40	.03½	.03⅝
No. 1 straw, 38-40	.03⅜	.03½
No. 2 straw, 32-36	.03¼	.03⅜
No. 2 dark, 32-36	.03⅛	.03¼
No. 3, zero to 15, 28-32	.03	.03⅛
No. 3, 15 and above, 28-32	.02¾	.02⅞

NEW YORK (Bayonne, N. J.)—

*No. 1	.04	.04¼
*No. 2		.03¾
*No. 4		.03¾

*Barge deliveries ⅛ to ¼ cent under above tankcar price.

Gas Oil and Fuel Oil

(Gas oil per gal., fuel oil per bbl.)

OKLAHOMA (Group 3)—

U.G.I. gas oil	.02½	.02⅝
No. 4 low pourpoint, 24-28	.90	1.00
No. 4, 15 and above, 24-28	.80	.90
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH TEXAS—

U.G.I. gas oil	.02½	.02⅝
No. 4, low pourpoint, 24-28	.90	1.00
No. 5, low pourpoint, 18-22	.70	.75
Below 14 fuel oil, industrial	.45	.55

NORTH LOUISIANA (Ark. and N. La. delivery)—

10-14 fuel oil, industrial	.70	.75

CHICAGO (Based on Group 3)—

U.G.I. gas oil	.02⅝	.02¾
No. 4, low pourpoint, 24-28	1.00	1.05
No. 4, 15 and above, 24-28	.85	.90
No. 5, low pourpoint, 18-22	.70	.80
No. 5, 15 and above, 18-22	.60	.70
No. 6, low pourpoint, 10-16	.60	.70
No. 6, 15 and above, 10-16	.35	.45

PENNSYLVANIA (Inland refineries)—

36-40	.04½	.04¾

CALIFORNIA—

Los Angeles:		
30-40 gas oil, per bbl.	1.10	1.30
24 plus Diesel, per bbl.	.80	1.15
24 plus Diesel (bunkers)	1.15	1.30
12-16 (bunkers at tidewater)	.70	.90
10-16 (cargo lots)	.60	.80
12-17 (tankcars)	.50	.90
10-17 (high sulfur)	.45	.85
San Joaquin Valley:		
10-18 (tankcars)	.50	.75
24 plus Diesel, per bbl.	.90	1.20
San Francisco:		
24 plus Diesel, per bbl.	1.30	1.45
24 plus Diesel (bunkers)	1.35	1.55
10-16 (bunkers)	.90	.95

GULF COAST—

No. 2 fuel	.03⅛	.03¼
43-47 Diesel		.03¼
48-52 Diesel	.03¼	.03⅜
53-57 Diesel	.03⅜	.03½
Bunker C (bulk cargoes)	.77	.80
Bunker C (bunkers)	.80	.85

NEW YORK (Bayonne, N. J.)—

27 plus, gas oil		.03¾
28-30 Diesel (lighterage 6¼c per bbl.)		1.65
28-30 Diesel (tankcars)	.04	.04¼
Bunker C (to ocean-going ships in N. Y. Harbor)		1.05
Industrial fuel (tankcars)		.03¼

Lighterage charge 5c bbl. additional.

Bright and Steam Refined

OKLAHOMA (Group 3)—

190-200 D, 15-25		.19
150-160 D, 0-10	.14¼	.16
150-160 D, 15-25	.13½	.15⅛
150-160 E, 15-25	.13	.15
100-110 D, 0-10		.14½
Steam refined:		
631 green (treated)		.12⅛
600 dark green (untreated)	.04½	.05

PENNSYLVANIA—

Bright Stocks (Pennsylvania Grade No. 8 color, 140-150 at 210, 545-550 flash):		
10 pourpoint	.18	.18½
15 pourpoint	.17	.17½
25 pourpoint	.15½	.16
Steam refined:		
600	.08½	.10
650	.10½	.11
600 flash	.11	.12
630 flash	.13½	.14

Neutral Oil

(Vis. at 100° F. except Pennsylvania and color N.G.A.)

OKLAHOMA (Group 3)—

150-3		.09
180-3		.10
180-4		.09½
200-3		.10½
200-4		.10
250-3		.11½
250-4		.11
280-3		.12½
280-4		.12
300-6½		.13
400-3½		.14
100-2½ paraffin oil		.06
15-20 pourpoint:		
200-3		.10
200-4		.09½
250-3		.11
250-4		.10½
280-3		.12
280-4		.12½

GULF COAST—

Pale oils:		
200-3	.07	.07¼
300-3	.07½	.07⅝
500-3½	.08½	.08¾
750-3½	.08⅝	.09⅛
1,200-3½	.09⅛	.09⅝
1,500-4	.09⅝	.10
Red oils:		
200-5-6	.07¼	.07½
300-5-6	.07¾	.07⅞
500-5-6	.08	.08⅛
750	.08¾	.09
1,200-5-6	.09¼	.09½

CALIFORNIA (moving to dom. market)—

Pale oils:		
100-2½-3	.07¼	.08
200-2½-3	.07¼	.08
300-2½-3	.07¼	.08
400-3-4	.07¼	.08
450-3-4	.07¼	.08
550-3-4	.09	.11
600-3-4	.09	.11
Red oils:		
200-4-5	.07¼	.08
300-5-6	.07¼	.08
350-5-6	.09¼	.11½
400-5-6	.09¼	.11½
450-5-6	.09¼	.11½
500-5-6	.09¼	.11½
600-5-6½	.09¼	.11½
700-6½ plus	.09¼	.11½
750-6½ plus	.09¼	.11½
900-6½ plus	.09¼	.11½

PENNSYLVANIA—

150 vis. at 70° F., 3 color, 400-405 flash:		
Zero pourpoint	.18½	.19
10 pourpoint	.18	.18½
15 pourpoint	.16½	.17
25 pourpoint	.15	.15½
200 vis. at 70° F., 3 color:		
Zero pourpoint	.19½	.20
10 pourpoint	.19	.19½
15 pourpoint	.18½	.19
25 pourpoint	.17	.17½

Wax and Petrolatum

(Prices per pound)

OKLAHOMA (Group 3)—

124-126 (a.m.p.) w.c. scale	.03	

PENNSYLVANIA (Inland refineries)—

122-124 (a.m.p.) w.c. scale	.0290	.03
124-126 (a.m.p.) w.c. scale		.03

NEW YORK—

Wax in bags fully refined:		
122-125 (a.m.p.) wax		.0350
125-127 (a.m.p.) wax		.0360
128-130 (a.m.p.) wax		.0375
130-132 (a.m.p.) wax		.0435
133-135 (a.m.p.) wax		.0465
135-137 (a.m.p.) wax		.0490
124-126 (a.m.p.) w.s.	.0290	.03
124-126 (a.m.p.) y.s.	.0295	.03
Petrolatum in barrels, carload lots:		
Dark green	.02	.02⅛
Amber	.02⅜	.02½
Extra amber	.02⅝	.02¾
Lily white	.05½	.05¾
Snow white	.06⅛	.06¼
Cream	.04⅛	.04¼

Export Prices

GASOLINE

GULF COAST—

U. S. Motor	.04¼	.04⅜
60-62 400	.04½	.04⅝
65 octane	.04⅞	.05
68 octane	.05½	.05¼
70 octane	.05¼	.05½

LOS ANGELES—

U. S. Motor grades:		
55-65 octane	.04½	.04¾
65-69 octane	.04¾	.05
Above 69 octane	.05	.05½

KEROSENE

GULF COAST—

41-43 prime white		.03½
41-43 water white		.03⅝

LOS ANGELES—

41-43 water white	.05	.05¼

LUBRICANTS

(Pennsylvania Grade)

NEW YORK (l.c.l. in bbls.)—

Cylinder stocks:		
600 Warren E	.15	.15½
600 S.R. unfiltered	.16	.16½
630 S.R. unfiltered	.17	.17½
600 flash, S.R.	.17	.17½
630 flash, S.R.	.20½	.21
Bright stocks:		
8 color	.16¼	.16½

NEUTRAL OIL

200-3 color	.21½	.22
150-3 color	.19½	.20

PARAFFIN WAX

NEW YORK (prices per pound)—

123-125 a.m.p.		.0375
125-127 a.m.p.		.0387
128-130 a.m.p.		.0412
133-135 a.m.p.		.0437
135-137 a.m.p.		.0455
Crude scale:		
124-126 w.s.	.0290	.03
124-126 y.s.	.0295	.03

Crude Oil Prices

Oklahoma, Kansas, North Central and East Central Texas

East Texas (Oct. 11, 1938)* $1.10
Van, Tex. (Oct. 11, 1938)* ..... .93
Talco, Tex. (Oct. 11, 1938)* ..... .55
Rodessa, Tex. .....
See North Louisiana gravity schedule
Cass and Panola counties, Texas .....
See gravity schedule
Altus and Tipton† ..... See note below
Cayuga, Tex. (Feb. 15, 1939) $0.68
Clay Creek, Tex. ..... .85

*Humble Oil & Refining Co. †Gulf Refining Co. Pure Oil Co.'s Van price, 93 cents, effective Oct. 13, 1938.

Altus and Tipton, Oklahoma, starting at below 25° at 71 cents, 2-cent spread to 40° and above at $1.03. East Texas price met by all buyers posting prices. Talco price adopted by Talco Pipe Line on Oct. 11. Cayuga posted by Pan American Pipe Line Co. Clay Creek posted by Sun Oil Co.

Southwest Texas

Salt Creek, Darst Creek, Hilbig, Carroll, Clark and Zoboroski (Oct. 11, 1938)* $0.96
Pettus (Oct. 11, 1938)* 1.29
Flour Bluff (Dec. 3, 1938)* 1.23
Darst Creek (Oct. 12, 1938)† ..... .96
Darst Creek and Bruner (Oct. 13, 1938)‡ ..... .96
Luling (Oct. 12, 1938)† ..... .87
Lytton Springs (Oct. 12, 1938)† ..... .99
Mirando (Oct. 12, 1938)† .....
Government Wells (Oct. 13, 1938) .....
See note below

*Humble Oil & Refining Co. †Magnolia Petroleum Co. Pettus price adopted by Atlantic Crude Oil Purchasing Co. ‡Gulf Refining Co.

Government Wells posted by Sun Oil Co. starts at 20° at 77 cents, 3-cent spread to 24°-24.9° at 89 cents.

Gulf Coast

Conroe, Tex. (Oct. 11, 1938)* $1.27
Black Bayou and White Castle, La. (Oct. 11, 1938)† ..... See note below
Gibson, La. (Oct. 11, 1938)† $1.04
Garden Island, La. (Oct. 12, 1938)‡ .. 1.24
Lafitte, La. (Oct. 12, 1938)‡ 1.04
Cleveland, Tex. (Oct. 12, 1938)¶ 1.14
Schwab, Polk County (Feb. 20, 1939) 1.00
Hardin, Tex. (Oct. 12, 1938)¶ 1.02
Tepetate, La. (Oct. 11, 1938)§ 1.03
Villa Platte, La. (Oct. 11, 1938)§ 1.03
Abbeville, La. (Jan. 1, 1939)§ .....
See note below
Bosco, La. (Dec. 3, 1938)¶ $0.93
Creole, La. (Oct. 13, 1938)§ ..... .96
Gueydan, Sweet Lake, and Louise, La. (Oct. 13, 1938)§ .... See note below
Vinton, Edgerly, Starks, Hackberry, Timbalier Bay, Quarantine Bay, and Grand Bay, La. (Oct. 13, 1938)** .....
Long Lake, Tex. (Oct. 13, 1938)** ... $1.08
Segno and Wing (Oct. 13, 1938)** ...
See note below
Livington (Oct. 11, 1938)† $1.10
Gibson, La. (Oct. 11, 1938)† 1.04

*Humble Oil & Refining Co. †Shell Oil Co., Inc. ‡Texas Co. §Continental Oil Co. ¶Pure Oil Co. ¶Magnolia Petroleum Co. **Gulf Refinery Co.

Black Bayou, etc., starts at below 20° at 79 cents; 20°-20.9°, 81 cents; 21°-21.9°, 83 cents; then a 3-cent spread to 26°-26.9°, 98 cents; then a 2-cent spread to 40° and over at $1.14. Abbeville starts at below 36°, 92 cents, 2-cent spread to 40° and over at $1.02. Gueydan, etc., starts below 20°, 79 cents, 3-cent spread to 26°-26.9° at $1, and 2-cent spread to 40° and over at $1.28. Segno and Wink take Gulf Refining Co.'s Gulf Coast prices. Vinton, Edgerly, etc., schedule starts at below 18°, 75 cents, 2-cent spread to 20°-20.9° at 82 cents; then a 3-cent spread to 26°-26.9° at $1; then a 2-cent spread to 34° and over at $1.16. Schwab posted by Shell Oil Co., Inc.

North Louisiana and Arkansas

Shreveport, La. (Apr. 18, 1939) $1.05
Smackover, Ark. (Oct. 5, 1938)* .... .73
Buckner, Magnolia, and Village, Ark. (Oct. 5, 1938)* ..... See note below
Schuler, Jones sand ..... See note below
Tullos and Urania $0.89
Cotton Valley, La. (distillate) (Dec. 23, 1938)* 1.20
Lisbon, La. (Apr. 29, 1939) .....
See note below

*Smackover posted by Standard Oil Co. of Louisiana, Oct. 5, 1938; by Magnolia Petroleum Co., Oct. 12; by Gulf Refining Co., Oct. 13; McMillan Refining Co. and Cross Refining Co. met price. Tullos and Urania posted by Hunt Oil Co. and Arkansas Fuel Oil Co.

Schuler Jones sand schedule starts at below 25°, 66 cents, with 2-cent spread to 40° and over at 98 cents; by Lion Oil Refining Co. on Oct. 5, 1938; Schuler light Morgan sand crude takes North Louisiana gravity scale along with El Dorado and Champagnolle; by Lion Oil Refining Co., Oct. 5; Buckner, Magnolia, and Village schedules posted by Standard Oil Co. of Louisiana and Lion Oil Refining Co. on Oct. 5; quote same prices as for Schuler Jones sand crude. Shreveport by Caddo Crude Oil Purchasing Co. and Atlas Oil Corp. Lisbon: Caddo Crude Oil Purchasing Co., posts below 34°, 73 cents; 34°-34.9°, 75 cents; 35° and above, 77 cents. Effective May 1, 1939, Gulf Refining Co. posted a flat price of 77 cents in Lisbon.

Middle Western States

OHIO OIL CO.
(Effective June 8, 1939)

Illinois old fields $0.95
Illinois basin 1.05
Princeton, Ind. ..... .95
Western Kentucky (June 9, 1939)† .. .90
Birk City, Ky. (June 9, 1939)¶ ..... .90
Corydon, Ky. (June 9, 1939)¶ $0.90
Greendale, Porter, Crystal and Wise, Mich. (Apr. 20, 1938)*† .. .975
Buckeye, Bentley, Edenville, Beaverton, Mich. (Apr. 20, 1939)* ..... .95
Freeman-Redding, Mich. (Apr. 20, 1939)* ..... .89
West Branch and Arenac, Mich. (Apr. 20, 1939)* ..... .74
Allegan-Kent (June 21, 1939)§ ..... .88
Bloomingdale (Apr. 10, 1939) ..... .88
Muskegon 1.00
Sherman, Mich. (Apr. 20, 1939)‡ .... .89
Eastern Kentucky:
Big Sandy River (June 9, 1939)† .. 1.02
Kentucky River (June 9, 1939)† .. 1.10

*Simrall Corp. †Ashland Refining Co. ‡Pure Transportation Co. pays above posted prices in Porter, Greendale and Sherman, effective Apr. 20. §Imperial Refining Co. ¶Sohio Oil Co. Bloomingdale posted by Tri-Lakes Corp. Kent County by Naph-Sol Refining Co.

West Texas

See gravity table.
Fisher County, Texas (Apr. 1, 1939) .....
See note below
Pecos County (Oct. 11, 1938)* $0.78
Pecos shallow (Oct. 11, 1938)† ..... .65

*Shell Oil Co., Gulf Pipe Line Co. and Humble Oil & Refining Co. †Shell Oil Co.

Fisher County, Texas, by Shell Oil Co., Inc., below 25°, 68 cents; 25°, 70 cents, with 2-cent spread to 40° and over at $1.

Rocky Mountin States

Dry Creek, Wyo. (Oct. 11, 1938)* ... $0.92
Elk Basin, Wyo. (Oct. 11, 1938)*† ... .90
Grass Creek, light, Wyo. (Oct. 11 1938)*† ..... .90
Grass Creek, heavy (Oct. 11, 1938)† . .40
Lance Creek, Wyo. (Oct. 11, 1938)* . .77
Rock Creek, Wyo. (Oct. 11, 1938)* .. 1.00
Iles, light, Colo. (Oct. 11, 1938)† .... .98
Iles, heavy, Colo. (Oct. 11, 1938)† .... .92
Dutton Creek, Wyo. (Oct. 11, 1938)† .....
See note below
Frannie, light, Wyo. (Oct. 11, 1938)† $0.55
Frannie, heavy, Wyo. (Oct. 11, 1938)† ..... .42
Hamilton dome, Wyo. (Oct. 11, 1938)† ..... .35
Midway, Wyo. (Oct. 11, 1938)† .....
See note below
Salt Creek Tensleep crude, Wyo. (Oct. 11, 1938)† $0.646
Salt Creek (Oct. 11, 1938) See note below
Canon City, Colo. (Oct. 11, 1938)‡ .. $0.90
Florence, Colo. (Oct. 11, 1938)‡ ..... .90
Cat Creek, Mont. (Oct. 11, 1938)‡ ... 1.10
Big Muddy, Wyo. (Oct. 11, 1938)‡ ... .98
Lance Creek, Wyo. (Oct. 11, 1938)‡ . .77
Lea County, New Mexico .....
See West Texas gravity schedule‡
Artesia, Jackson and Maljamar .....
See gravity table‡
Fort Collins and Wellington, Colo. ...
See gravity table‡
Eddy County, New Mexico (Oct. 11, 1938)§ $0.77

*Ohio Oil Co. †Stanolind Oil & Gas Co. ‡Continental Oil Co. §Sinclair Prairie Oil Marketing Co.

Dutton Creek and Salt Creek Tensleep crudes start at below 29°, 86 cents, 2 cents spread up to 40° and over at $1.10. Salt Creek crude, excepting Tensleep, takes Standard Oil Co. of Indiana's Oklahoma-Kansas prices. Stanolind Oil & Gas Co., effective Oct. 11, discontinued posting prices in Greybull-Torchlight, Wyoming, and Hogback and Hospah, New Mexico.

Eastern States

SOUTH PENN OIL CO.
(Effective Mar. 6, 1939)

Pennsylvania Grade oil in National Transit lines (Bradford field) ... $2.00
Pennsylvania Grade oil in Southwest Pennsylvania lines 1.65
Pennsylvania Grade oil in Eureka Pipe Line lines 1.59
Pennsylvania Grade oil in Buckeye Pipe Line lines 1.55
Corning grade oil in Buckeye Pipe Line Co. line (Jan. 24) 1.02

TIDE WATER ASSOCIATED OIL CO. and NEW YORK TRANSIT CO
(Effective Mar. 6, 1939)

Bradford, Pa. $2.00
Allengany, N. Y. 2.00

PENNZOIL CO.
(Effective Mar. 6, 1939)

Group A $1.95
Group B 1.94
Group C 1.93
Group D 1.92
Group E 1.90

PURE OIL CO.
(Effective Mar. 6, 1939)

West Virginia $1.59

Crude Oil Price Changes

Imperial Refining Co. increased its posted price in the Kent County, Michigan, fields 10 cents per barrel, or to 88 cents. This meets the Naph Sol Refining Co.'s advance of June 19. The announcement last week that Naph Sol had met the Imperial price was an error.

Standard Oil Co. of Louisiana, effective June 20, withdrew its posted price for crude oil in the Magnolia field in Columbia County, Arkansas.

Twin Dome Structure

CALGARY, Alta.—A report on the Twin Dome structure, south of Calgary and northeast of Calgary, brought into prominence when Anglo-Canadian Oil Co. No. 1 got the Madison at 6,651 ft., has been made public by Dr. G. S. Hume of the Geological Survey of Canada.

The structure begins in the Sarcee Reserve where it has been observed on Fish Creek north of Section 31-22-2w4. Here the Paskapoo strata dip to the northeast at 75° to 80°, indicating faulting in the central part of the anticline. On Fish Creek in Section 36-22-3w4, the same strata dip southerly at 10° to 35°, and on the south bank in the Sarcee Reserve near NE Section 31-22-2w4, the dip is about 10° northeast. Thence the structure passes north of Lloyd Lake and De Winton to the Twin Dome area, a distance of 11 miles.

North of De Winton the strata is defined by gentle northeast dipping Paskapoo strata in Sections 11-22-1w5 and 12-22-1w5, and by gently dipping southerly and southwesterly beds in a railroad cut in Section 2 and on Pine Creek, SE Section 10. East of the Macleod Trail the anticlinal structure can be observed at but few places, particularly on Sections 27-21-29w4 and 28-21-29w4, where Paskapoo beds dip southwest at 15° and northeast at 30°. Here the exposed beds are about 500 ft. apart across the axis of the anticline. At Twin Dome the beds have a dip of 10° to 15° and the anticlinal structure is well marked.

Southeast of Twin Dome the anticline may persist across Gladys Ridge, possibly having some connection with the Eyremore fold. The structure of which Twin Dome is a part may be persistent for a long distance, as indicated by the Lloyd Lake-Gladys Ridge structural trend.

Crude Prices by Gravities

	1 Oklahoma	2 Oklahoma and Kansas	3 North and Central Texas	4 Louisiana and Arkansas	5 East Central Texas	6 Gray County, Texas	7 Hutchinson and Carson counties, Texas	8 Racoon Bend, Satsuma and Tomball, Texas	9 West Texas and Lea County, N. M.	10 Fort Collins and Wellington, Colo.	11 Anahuac and Dickinson, Mirando, Duval, Texas.	12 Refugio, Texas	13 Gulf Coast Texas	14 Cass and Panola counties, Texas	15 Beaumont and West Beaumont, Texas	16 Lockport, Iowa, Cameron Meadows, Louisiana	17 Artesia, Jackson and Maljamar, N. M.	18 Iowa, Louisiana
Below 18	....	....	....	....	....	....	....	....	.53	....	.74	.79	.79	....	....	.74	....	.75
18-18.9	....	....	....	....	....	....	....	....	.53	....	.74	.79	.79	....	.79	.76	....	.77
19-19.9	....	....	....	....	....	....	....	....	.55	....	.77	.82	.82	....	.82	.80	....	.81
20-20.9	.60	.70	....	....	....	....	....	....	.57	....	.80	.85	.85	....	.85	.82	....	.83
21-21.9	.63	.72	....	....	....	....	....	....	.59	....	.83	.88	.88	....	.88	.85	....	.86
22-22.9	.66	.74	....	....	....	....	....	.95	.61	....	.86	.91	.91	....	.91	.88	....	.89
23-23.9	.69	.76	....	....	.78	....	....	.97	.63	....	.89	.94	.94	....	.94	.91	....	.92
24-24.9	.72	.78	.71	....	.80	....	....	.99	.63	....	.89	.94	.94	....	.94	.91	....	.92
Below 25	....	....	....	.73	....	....	....	....	....	....	....	....	....	.73	....	....	....	....
25-25.9	.75	.80	.73	.75	.82	....	....	1.01	.65	....	.92	.97	.97	.75	.97	.94	....	.95
26-26.9	.78	.82	.75	.77	.84	....	....	1.03	.67	....	.95	1.00	1.00	.77	1.00	.97	....	.98
27-27.9	.81	.84	.77	.79	.86	....	....	1.05	.69	....	.97	1.02	1.02	.79	1.02	.99	....	1.00
28-28.9	.84	.86	.79	.81	.88	.72	.67	1.07	.71	.81	.99	1.04	1.04	.81	1.04	1.01	.61	1.02
29-29.9	.87	.88	.81	.83	.90	.74	.69	1.09	.73	.83	1.01	1.06	1.06	.83	1.06	1.03	.63	1.04
Below 30	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
30-30.9	.90	.90	.83	.85	.92	.76	.71	1.11	.75	.85	1.03	1.08	1.08	.85	1.08	1.05	.65	1.06
31-31.9	.92	.92	.85	.87	.94	.78	.73	1.13	.77	.87	1.05	1.10	1.10	.87	1.10	1.07	.67	1.08
32-32.9	.94	.94	.87	.89	.96	.80	.75	1.15	.79	.89	1.07	1.12	1.12	.89	1.12	1.09	.69	1.10
33-33.9	.96	.96	.89	.91	.98	.82	.77	1.17	.81	.91	1.09	1.14	1.14	.91	1.14	1.11	.71	1.12
34-34.9	.98	.98	.91	.93	1.00	.84	.79	1.19	.83	.93	1.11	1.16	1.16	.93	1.16	1.13	.73	1.14
Below 35	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
35-35.9	1.00	1.00	.93	.95	1.02	.86	.81	1.21	.85	.95	1.13	1.18	1.18	.95	1.18	....	.75	....
36-36.9	1.02	1.02	.95	.97	1.04	.88	.83	1.23	.87	.97	1.15	1.20	1.20	.97	1.20	....	.77	....
37-37.9	1.04	1.04	.97	.99	1.06	.90	.85	1.25	.89	.99	1.17	1.22	1.22	.99	1.22	....	.79	....
38-38.9	1.06	1.06	.99	1.01	1.08	.92	.87	1.27	.91	1.01	1.19	1.24	1.24	1.01	1.24	....	.81	....
39-39.9	1.08	1.08	1.01	1.03	1.10	.94	.89	1.29	.93	1.03	1.21	1.26	1.26	1.03	1.26	....	.83	....
40 and over	1.10	1.10	1.03	1.05	1.12	.96	.91	1.31	.95	1.05	1.23	1.28	1.28	1.05	1.28	....	.85	....

New or Improved Equipment

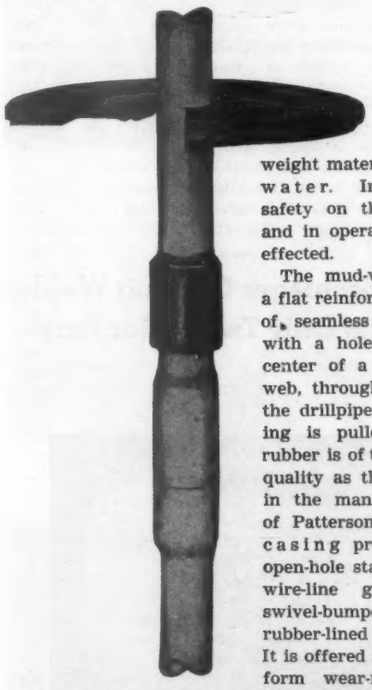
Forged Welding Street Tee Is Announced by M. B. Skinner

The new Skinner-Seal forged welding tee is an extra-heavy fitting of forged steel, designed to fill the need for a welding street tee, offered by the M. B. Skinner Co., South Bend, Ind.

Made in 1-in. and 1¼-in. sizes, the top can be threaded with inside or outside pipe threads as desired, or socket-bored for plain-end pipe to be welded in. The base end, contacting the main, is milled to the radius of the main and can be furnished optionally, so outlet is parallel to or at right angles to it. The tee can be fitted at extra cost with the new Skinner-Seal safety check-valve at the top, making it especially desirable, the company says, for cutting in on high-pressure lines without shutting off pressure.

Pipe-Wiper Effects Savings in Weight Material, Mud, Water

Patterson-Ballagh Corp., Los Angeles, Calif., offers the newest addition to its family, the Patterson-Ballagh pipe-wiper, designed to save mud, weight material, and water. Increased safety on the floor and in operations is effected.



The mud-wiper is a flat reinforced disc of seamless rubber with a hole in the center of a flexible web, through which the drillpipe or tubing is pulled. The rubber is of the same quality as that used in the manufacture of Patterson-Ballagh casing protectors, open-hole stabilizers, wire-line guides, swivel-bumpers and rubber-lined nozzles. It is offered as a uniform wear-resistant rubber of highest tensile strength. The hole in the center of the wiper is slightly smaller than the diameter of the pipe, and as there is no break in the web, the mud or oil is "squeezed" from the surface completely. The web is so flexible that tool-joints and protectors pass through without trouble. As no water is needed, there is no dilution and therefore no mud or weight material is added to compensate, a saving some operators report runs from $20 to $50 a "trip."

The inside edge of the wiper is beaded to increase the wiping effect, increase its life and decrease the danger of tearing. A flat metal disc is fabricated inside the outer edge so there is strength without exposed metal. There is therefore no metal contact to cause a fire hazard by sparks. There are no exposed bolts to catch and tear the web.

Here and There With Men Who Manufacture Equipment

Eugene Jurs, of Shand & Jurs Co., Berkeley, Calif., is spending a month in the Mid-Continent and Gulf Coast areas in the interests of his company. He is accompanied by the Houston representative, David Lindsay.

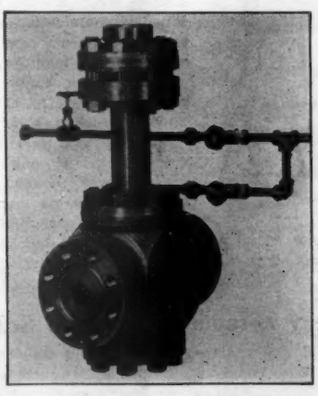
Edwin J. Schwanhausser has been elected a vice president of Worthington Pump & Machinery Corp. Mr. Schwanhausser's connection with Worthington dates back to 1915, when he graduated from Stevens Institute of Technology.

W. Robert Timken has been appointed assistant to the president of Timken Roller Bearing Co., Canton, Ohio. Since graduating from Harvard University in 1933 he has served in various capacities throughout the plant.

Link-Belt Co., Chicago and Philadelphia, has been appointed distributor for twin-disc clutches and clutch couplings by Twin Disc Clutch Co., Racine, Wis.

Coynco High-Pressure Shutoff Valve Increases Well Safety

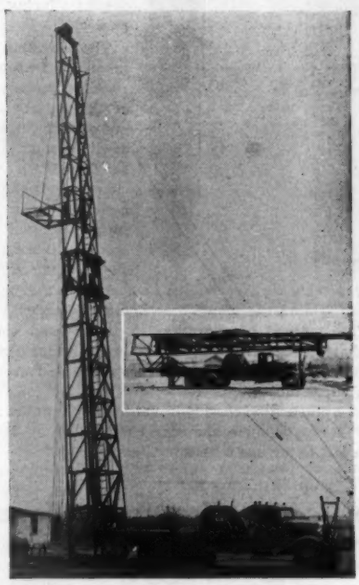
Operating automatically to close the well in the event of a break in the line or a fire at the plant, the Coynco high-pressure differential shutoff valve has been perfected by Joseph A. Coy Co., Inc., Tulsa. The valve is placed on the gas line leading from the well, and just beyond the choke. The differential in pressure created by a break in the line instantly shuts the well in, thus eliminating fire hazard, loss of gas, and cratering of the well.



When the Coynco valve is installed on the gas line, the pressure is by-passed into the valve by a connecting line which divides and enters the valve bonnet above and below the highest and lowest position of the piston. Each of these lines is equipped with a small high-pressure valve. Another lead is taken from the gas line on the downstream side. This small line is also fitted with a valve.

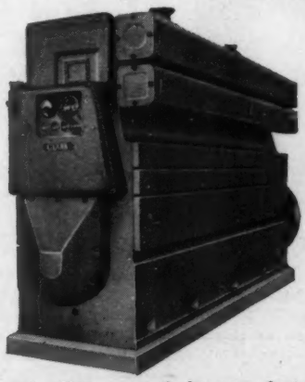
Portable Telescoping Derrick Is Latest Franks Development

Franks Manufacturing Corp., Tulsa, announces a portable truck-mounted 84-ft. telescoping derrick for well servicing. The unit, according to Carl White, Jr., vice president, consists of a truck, any make of proper weight specified; derrick; Franks final friction drive winch; and Franks patented power take-offs for driving winch with truck motor. Folded down in over-the-road position, as seen in the inset, the derrick is only 45 ft. long. It is raised by a power screw, similar to the one used on the Franks portable rotary drilling units. Time for raising the derrick from over-the-road position and telescoping to the full 84 ft. is said to be 10 minutes maximum.



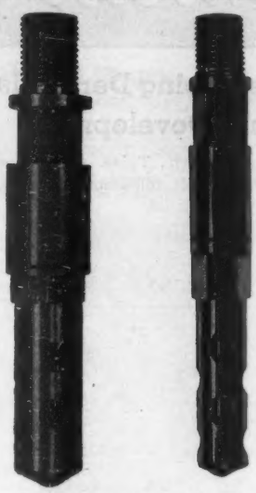
Convertible Gas-Diesel Makes Wide Range of Fuels Possible

A new line of convertible 4-cycle gas and Diesel engines has been announced by Clark Bros. Co., Olean, N. Y. These new engines are completely enclosed, have oil-cooled pistons, full-force lubrication, and offer an entirely new feature, the Clark "cetane selector." By means of the "cetane selector," the operator can change the fuel timing without shutting down the engine, thus making possible the use of a wider range of fuels.



Recording Thermometer Gives Temperature at All Depths

Martin-Decker Corp., Long Beach, Calif., has announced a device for accurately measuring oil-well temperatures. The Martin-Decker Radium recording thermometer does not indicate maximum temperature only, but charts in a clear legible line complete information on temperatures at all depths during one run.



The recording thermometer features a radium-tipped pointer that charts a record of heat variations as it moves over a sensitized paper chart. The pointer is actuated by an extremely sensitive and accurate thermal element that expands and contracts with variations in heat, thus moving the pointer around the chart. The pointer provides a friction-free method of operation, as it does not contact the chart. The instrument can be used on any drilling or producing well and is small enough to be run inside "spaghetti" tubing.

In the illustration the 1½-in. thermometer at the right is for use with a circular-type chart. The 1¼-in. one at the left is for use with a strip-type chart.

Thompson in Houston for Security

Security Engineering Co., Inc., has transferred H. E. (Eddie) Thompson to its new plant in Houston, Tex., where he will represent the company in the sale of Securaloy, Security drillable products, the Sievers reamer and the other oil-field equipment manufactured by Security. Mr. Thompson, who has had wide experience in oil-field work, spent eight years in South America, where he was equipment engineer for the drilling and production departments of one of the major operators. This, combined with his long period of service in American fields, has provided him with a well-rounded knowledge of oil-field practices under widely varying operating conditions.

Jackson Succeeds His Father

John Edward Jackson was elected president of Pittsburgh-Des Moines Co. to succeed his father, who died last April 26. Mr. Jackson graduated in civil engineering from Iowa State College in 1924, following which he has been connected with various departments of the Pittsburgh-Des Moines Co. and its affiliate, Pittsburgh-Des Moines Steel Co. Since 1935 he has been general manager of the construction department. Under his supervision have been performed many jobs of magnitude, including the large wind tunnel for N.A.C.A. at Langley Field, Va., and the high-pressure wind tunnel for Massachusetts Institute of Technology.

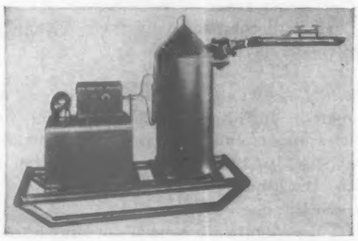
William R. Jackson was elected a director of the Pittsburgh-Des Moines Co. and also assistant secretary and treasurer. Other officers remain unchanged.

Lucey Agent for Murphy Diesel

Murphy Diesel Engine Co., Milwaukee, Wis., has appointed Lucey Products Corp., Tulsa, distributor of its Diesel engines throughout the Mid-Continent area. The engines, developed by Moyes J. Murphy, are recommended for oil-field use as they are light and compact for the amount of horsepower they develop. Lucey Products maintains stores at various points in the Mid-Continent field. "Bill" Morgan will continue to represent Murphy Diesel in the Mid-Continent, and will work closely with Lucey Products. He will maintain offices at 911 South Boston Avenue, Tulsa.

Two Devices Tell Operator of Presence or Absence of Oil

Two new inventions, the Mid-Continent gas-detector and the Mid-Continent fluoroscope, manufactured by Mid-Continent Supply Co., Fort Worth, Tex., are designed to give reliable and immediate information regarding the absence or presence of oil and gas in the formation being drilled. The gas-detector can be installed on any rig and by using it in conjunction with its companion instrument, the fluoroscope, the operator can determine how much of the section being drilled carries an oil showing and form an idea as to



saturation. The instruments make more accurate logging possible and are an aid in subsurface mapping.

The Mid-Continent gas-detector is fed by diverting a stream of mud of approximately 2 in. from the flow line through a separator tank on its way to the slush-pit. Baffles in the tank break out any minute gas bubbles in the mud, and the gas rises to the top of the tank where it is mixed with air. This mixture then is carried by suction to the electrical combustion-detector which closes a contact and sounds the siren when the air contains a mixture of 2 per cent gas or more.

The Mid-Continent fluoroscope operates through the principle of fluorescence observation. When petroleum, even in a very weak solution, is placed under a light of a certain frequency it will give off a ray of a different frequency, and it is these rays which are observed by the operator in looking at a mud sample, when any oil is present. An examination of mud samples takes only long enough for a member of the crew to catch a sample of mud in the sample-basket as it goes into the slushpit, slide it into the fluoroscope and take a quick look. If any oil is present, even though the solution may be no more than one part in one million, he can readily identify it. So simple and quick is this operation that it encourages frequent testing.

Tracy Directs Subsurface Sales

Lloyd E. Tracy, since 1935 sucker-rod sales engineer with Oil Well Supply Co. in Dallas, Tex., has been appointed manager of subsurface sales for "Oilwell's" Mid-west division, comprising all oil-producing areas west of the Mississippi River but excluding California. He will maintain his headquarters in Dallas.

Mr. Tracy received his academic training in Southwest Missouri State College and the University of Missouri, following which he spent 8 years with National Tube Co. in metallurgical work in the Gary, Ind., and Ellwood City, Pa., plants. This experience and 4 years with "Oilwell" give him a sound background for subsurface engineering work.

Line Surges Are Prevented by New Type Burgess Snubber

In many locations, flying sparks from the exhaust of Diesel engines are troublesome or hazardous. To trap these flying particles and at the same time prevent exhaust noise, Burgess Battery Co., Acoustic Division, Department NR, 500 West Huron Street, Chicago, has developed a new spark-arresting type of exhaust snubber.

Like all Burgess exhaust snubbers, the Burgess SDHS snubs the slugs of high velocity exhaust gas which rush into the exhaust pipe and bleeds them to low pressure before any noise can be created. Hence, the snubber prevents the building up of line surges and peak back pressures which cause high fuel consumption.

Two methods of spark removal are utilized in this design. First, because of the large cross-sectional path, the velocity of the gases is low and the heavier particles tend to separate out by gravity. Second, the exhaust gases change direction and velocity so that the remaining finer carbon particles are thrown out due to centrifugal action. The carbon and ash drop into a large chamber in the bottom of the snubber, where they can be removed through a handhole.

Heads Cooper-Bessemer Office

Cooper-Bessemer Corp., manufacturer of gas and Diesel engines and compressor units, has opened its new Corpus Christi, Tex., sales office at 314 Louisiana Street. Earl P. Martin is in charge. Mr. Martin is a graduate of the college of engineering at the University of Kentucky. Soon after receiving his degree in mining engineering in 1924, he joined Foxboro Co. as sales engineer. In 1931, he became affiliated with Montana Power & Gas Co. of Butte, Mont., serving in its gas measurement department. Three years later he became sales engineer for Pittsburgh Equitable Meter and Merco-Nordstrom Valve companies, being located in Houston and Corpus Christi, Tex.

Harnischfeger Offering Welder With Only Two Major Parts

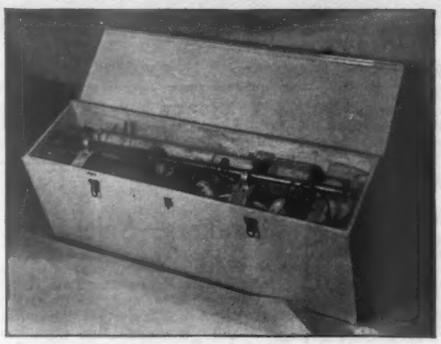
Harnischfeger Corp., Milwaukee, Wis., manufacturer of the complete line of P&H-Hansen electric arc welders and welding electrodes announce the new P&H-

Hansen Model WA-200 square-frame welder for multi-arc service. Simple, compact, easy of operation, this is a precision-built welder whose design makes possible its manufacture with the practical economies of modern mass production.

The WA-200 requires less than 3½ sq. ft. of floor space and offers a welding range from 40 to 225 amps. It has only two major parts, the one-piece frame and the rotating member itself. All attachments, such as external exciters, reactors, resistors, rheostats or separate stabilizers are absent.

Caterpillar Provides Boxes for Convenient Storage of Parts

Three boxes for convenient storage of parts used in the natural-gas attachment for 125-hp. "Caterpillar"



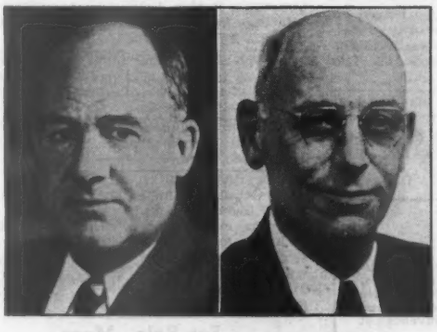
Diesel engines are provided by Caterpillar Tractor Co., Peoria, Ill. Two of them contain the two three-cylinder heads used in the six-cylinder engine. The third, shown in the illustration, is for miscellaneous parts. It is longer and slenderer, with ample room for all the fuel line, carburetors, etc. The boxes are waterproof and they are partitioned to hold the replaced Diesel parts after the conversion. Thus the engine operator has a dry, clean, portable storage space.

Allsteel Products Changes Name

Allsteel Products Manufacturing Co., Wichita, Kans., whose trademark has been "Cardwell Allsteel," has found it necessary to change its name to Cardwell Manufacturing Co., Inc., on account of confusion among file clerks and others. There is no change in the financial setup or ownership. The company has been progressive in designing and improving drilling rigs, both rotary and cable tool.

BJ Makes Personnel Changes After Its Acquisition of Elliott

Following acquisition by Byron Jackson of Elliott Core Drilling Co. changes and additions have been made to improve sales and service facilities of the Elliott wire line retractable core-drill and drilling assembly, the Elliott Model A combination rotary core-drill, and other products previously marketed by the Elliott organization.



J. E. ELLIOTT *REED GRAINGER*

GEORGE JACOBS *J. D. HICKS*

J. E. (Brick) Elliott, Reid B. Grainger, and George Jacobs are continuing their association with Elliott products through the BJ Elliott division of Byron Jackson Co. on the Gulf Coast, and J. D. (Joe) Hicks, previously of the drilling contracting firm of Robinson & Hicks, has been added to the staff as sales representative.

Houston Oil Field Material Co., and Wilson Supply Co. will act as Gulf Coast distributors. California sales and service will be handled by Pacific Cementing Co. John H. Baird, 808 Graybar Building, 420 Lexington Avenue, New York, will continue as export representative.

Trade Literature

B. F. GOODRICH CO., Akron, Ohio.—Revised edition of booklet, "Quit Your Skidding."

BONNEY FORGE & TOOL WORKS, Allentown, Pa.—92-page catalog of Bonney tools.

MULTI-METAL WIRE CLOTH CO., 1350 Garrison Avenue, Bronx, New York.—Looseleaf handbook on wire and filter cloths, their fabrication and uses.

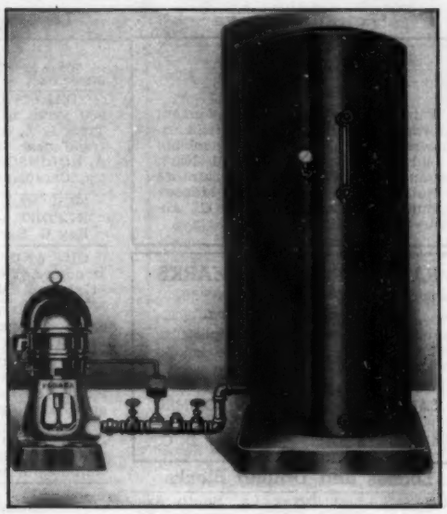
MORSE CHAIN CO., Ithaca, N. Y.—Catalog on Morse flexible couplings.

New Building for Vapor Recovery

Expanding business has made it necessary for Vapor Recovery Systems Co. to build a new office at its present location, 2820 North Alameda Street, Compton, Calif. The building will be two stories high, of streamlined Class A construction. The floor space will be approximately 4,000 sq. ft., divided into private offices, display room, reception room, large general office, engineering department for 12 engineers and an art and advertising section. Two large fireproof vaults will preserve drawings and documents.

Pomona's Little Chief Pump Is Not Too Large or Too Small

Drillers, oil and gas operators, and plant operators will be interested in the Little Chief pump announced by Pomona Pump Co., St. Louis, Mo., and Pomona, Calif. According to the company this pump is neither too large nor too small, yet because of water lubrication and other exclusive features, does away with oil, grease or other foreign matter getting into the constant flow of water produced.



The Little Chief lifts 10 to 200 ft. with pressure up to 40 lb., and produces 700 to 2,000 gal. an hour. The pumps are powered by motors of ¾ to 3 hp., single-phase, 60-cycle, 3,415 r.p.m.

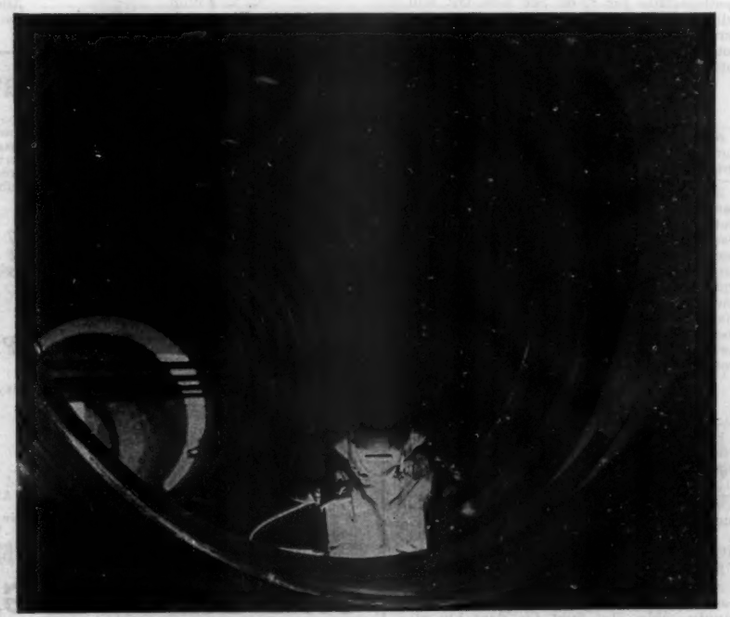
The ¾-hp. and 1-hp. motors are of the capacitor-start, induction-run type, with the capacitor attached as an integral part of the motor. The 1½-hp. and 2-hp. sizes are of the repulsion-induction type. Three-phase motors are of the squirrel-cage type. The motor is of solid-shaft construction with the motor-shaft directly coupled to the drive-shaft through a threaded coupling. The illustration shows a Little Chief connected with a pressure-system tank.

SHIPMENT OF SMITHLINED VESSELS OFF FOR CURACAO

Another shipment of giant oil-refining vessels, destined for service at Curacao in the Dutch West Indies, recently left the Milwaukee, Wis., plant of A. O. Smith Corp. This shipment consisted of two reaction chambers, two flash chambers and four fractionating columns, varying in size up to 10 ft. 3 in. in diameter and 85 ft. 3 in. long.

All eight vessels were Smithlined throughout to resist the attacks of corrosive crudes. By this patented construction, chrome alloy sheets are spotwelded to the steel plates at close intervals, becoming an integral part of the plates before they are formed into cylinders and heads. This lining method provides a homogeneous surface resistant to corrosion even with very thin linings, the manufacturer says.

All the vessels were built in accordance with A.P.I.-A.S.M.E. codes. All welds were X-rayed, and each tower was stress-relieved and then hydrostatically tested before shipment. The shipment was carried by rail to New York, then transferred to ocean-going freighters.



The illustration shows a welder squatting at his work in the shell of one of eight vessels.

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JACK A. SCHLEY
PATENT LAWYER

Patents obtained — infringement practice in all Courts—oil field experience, 1807-11 Tower Petroleum Bldg., Dallas, 2014 Second Nat'l. Bank Bldg., Houston, 707 Insurance Building, San Antonio. 433 Munsey Building, Washington, D. C. Address any of these offices.

PATENTS — TRADE MARKS
All cases submitted given personal attention.
Form **"Evidence of Conception"** with instructions for use and **"Schedules of Government and Attorneys' Fees"—FREE**
LANCASTER, ALLWINE & ROMMEL
Patent Law Offices
418 Bowen Bldg., Washington, D. C.

Leases and Drilling Blocks

LEASES—East Texas, La., South Ark. 20 acres up, dollar acre up.—Owners—Address Attorney, Box 1122, Little Rock, Ark.

ILLINOIS 60,000 acres in and near production. Illinois Minerals Company, Cairo, Illinois.

FOR SALE Oil and gas leases, drilling propositions and small production. All in shallow territory. Will make price on 500 or more acres, drill and case one or more wells. W. P. HARLEY, Bowling Green, Kentucky.

BROKERS and SALESMEN
only
A complete SERVICE EXPERTS in every department of the Oil Business at your SERVICE a REAL SET-UP. The best opportunity ever offered you. Leases in large or small lots at
WHOLESALE PRICES
Write today and get started right.
OIL BROKERS EXCHANGE
200 Don Juan Bldg., Santa Fe, N. M.

FOR SALE — 11,400 acres deeded land carrying all oil, gas and mineral rights located in Valencia County, New Mexico. Oil now being produced within approximately 50 miles of property. Will furnish spotless title for $3.00 per acre OR will sell 10-year oil and gas lease for $1.50 per acre with 15c per acre annual rental. Will not consider anything but cash deal. If interested write:
Owner, c/o J. W. B.,
Box 915,
Roswell, New Mexico.

SACRIFICE 40-acre Oil Lease, Chaves County, for only $10.00, full price. Guarantee title P. O. Box 191, Clovis, N. Mex.

MILLIONS OF DOLLARS have been paid to the owners of shallow gas and oil wells in the Eastern Kansas Fields. Countless thousands of such wells are now producing, some over twenty years. Depths vary from 350 to 800 feet for both oil and gas. This makes cost and investment low. Returns are in greater proportion than most deeper wells. Have several good blocks in proven fields from 40 acres to 4000. Will drill key job price on well or deal leases. Write for details.
H. B. SNYDER
Box 126,
Ottawa, Kansas.

EAST TEXAS Woodbine—Trinity sand wildcats starting shortly offer best chances big quick money. Leases—Royalties.
E. CROFT, PROCTOR, TEXAS.

FOR SALE. Oil leases with shallow production Eastern Kansas. High gravity oil. J. E. Houston, Board of Trade, Kansas City, Mo.

BROKERS—Quick profits for you and a speculative fortune for your clients in leases near our 6,500-foot test Grady County, Okla. Hot Spot for next big oil field. Special deal for brokers.
STAUFFER PETROLEUM COMPANY
P. O. Box 774 Oklahoma City, Okla.

Leases and Drilling Blocks

MISSOURI leases in blocks and scattered acreage. HARRAH & FRITH, Chillicothe, Missouri.

YOAKUM CO., Tex., 10 yr. oil lease on 980 acres in Sec. 596 and 597 for sale. Tract is ¾ x 2 miles and traverses high trend near Roberts pool. Owner, DR. J. A. ROBINSON, 233 21st Place, Santa Monica, California.

NEW MEXICO WEEKLY OIL SCOUT REPORT. — Send for sample copy. Roy G. Barton, Box 968, Hobbs, N. M.

OIL AND GAS leases, near wells on structure. Forest City Basin. Box 423, St. Joseph, Mo.

WANTED proven or semi-proven acreage for immediate drilling. J. Bell, 4812 Pine Tree Dr., Miami Beach, Florida.

INVESTORS, brokers, salesmen, a new deal in shallow production, best ever offered. You receive an interest in 40 acres on which I drill a well. In addition you receive a lease on 50 acres abutting the 40 I drill. All in proven area. Your total investment only $150.00. Buddenborg, Osawatomie, Kans.

NEW MEXICO
State Oil and Gas Leases
Forty acres and multiples thereof at $6.00 to $60.00 per forty in the Hot Spots. No junk! Buy where the major companies own leases. Write for lists. Twenty years in the business and not a complaint.
HARRY S. WRIGHT, STATE LESSEE
Registered Dealer—State of Iowa
Box 166, Council Bluffs, Iowa
Box 347, Santa Fe, New Mexico

320 ACRES, Crane Co., Tex., Magnolia lease, cheap in fee. Address 415 Littlefield Building, Austin, Texas.

WHY A DRY HOLE?
Have your land or lease examined, honest opinion given, location made. Address Box K-153, The Oil and Gas Journal, Tulsa, Okla.

GAS PAYS LIKE OIL
1/16th spread in 5 leases offsetting production $500. 1/16th interest individual lease $125. Upon sale 7 spread interests 5 wells drilled. Pipelines in production returns 20%. Money escrowed. Maps, information.
BOX 382,
Osawatomie, Kans.

ALBERTA — CANADA
Leases and Drilling Blocks
Tell us your requirements and receive promptly full and accurate information.
OILFIELDS INFORMATION AGENCY
C. T. Fillan
810 Lancaster Bldg., Calgary, Alberta.

Leasing and Drilling Blocks

HAVE spreads and drilling blocks in Misscuri for sale or trade, or if you have equipment capable of 2,000 feet, a mutually profitable arrangement might be made.
Address Box J-152,
The Oil and Gas Journal, Tulsa, Okla.

RELIABLE drilling contractor with good rig will sell 1/8 interest in 200-acre oil lease, high gravity shallow oil district northeast of Tulsa for $50. to buy fuel to drill first well. Casing furnished. Money may be escrowed in bank until well is completed to pay sand. Write for full details and references. Box 83, Foyil, Okla.

AM STARTING well on well located block Western Kansas in line with and near production. Almost sure shot for well. Have acreage for sale at reasonable prices. Wonderful chance for large profits on small investment. Write or call for maps and full particulars. J. F. Root, 418 Central Bank Bldg., Phone 2-0062, Tulsa, Okla.

Situations Wanted

EXPERIENCED stillman, 10 yrs. one company, now available. Sober, industrious, capable. Address Box K-143, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED Oil Field Equipment salesman wants to associate with manufacturer who desires to sell products thru supply stores on a commission basis. Address Box K-154, The Oil and Gas Journal, Tulsa, Okla.

WANTED—POSITION
As Accountant or Auditor
Graduate; specialized in accounting; experienced in taxation; six years major oil companies; four years diversified public accounting; three years manufacturing; married; age 33. Address Box K-160, The Oil and Gas Journal, Tulsa, Oklahoma.

EXPERIENCED refinery technician will operate your old plant or build and operate new plant more efficiently and at a greater profit. Graduate M.I.T. Chemical Engineer with 13 years' industrial experience including positions as Process Supervisor and Chief Chemist. Experienced in development and manufacture of lube oils, greases, wax, asphalt, specialties, and light oils. References. Address Box K-162, The Oil and Gas Journal, Tulsa, Okla.

EXPERIENCED Gasoline Plant operator, mechanic, meter-man. 12 yrs. with major oil company, 9 yrs. in S. America. Address Box K-163, The Oil and Gas Journal, Tulsa, Okla.

Royalties

ANDREW J. BARRETT
The Philtower
Tulsa, Oklahoma.

Brokers—Salesmen

Sell in the most active area in the United States—The Permian Basin of West Texas and Southeastern New Mexico. From the standpoint of royalty investors this area has much to offer. Can supply you with choice non-producing royalties located on geophysical highs. Also drilling blocks, close in acreage to production, or wildcat leases. I maintain my own field men who cover this area for me. All offerings meet the requirements of the Security and Exchange Commission. Inquiries invited.

B. D. BUCKLEY
Paul Brown Bldg., St. Louis, Mo.

PRODUCING OIL ROYALTIES
15 years of experience.
L. H. WITWER
703 Kennedy Bldg., Tulsa, Okla.

WILL BUY non-producing landowners royalty—under drilling wells only. P. H. HAWLEY, 727 W. 7th St., Los Angeles, Calif.

WANTED producing oil royalties and oil payments in North and West Texas and New Mexico. P. O. Box 1535, Fort Worth, Texas.

WANTED non-producing land owners royalty under drilling wells only. Eldon J. Dick, 305 Public Service Building, Tulsa.

ROYALTY INTERESTS bought and sold; under TEXAS, GULF and SUN blocks, Concordia Parish, Louisiana. Inquiries and offerings invited. J. G. REAVES, REAVES BLDG., TYLER, TEXAS.

OWNERS of fractional landowners royalty interests still paying send full details to City Investing Co., 434 Roosevelt Bldg., Los Angeles, Calif.

WILL buy producing royalties and mineral rights in Arkansas. P. O. Box 807, El Dorado, Ark.

FOR SALE: 1/8 royalty. 40 acres, Nowata County, Okla. In the heart of flood. Lease owned by major Co. who are developing extensively. Forced to sacrifice. If interested call in person, will not answer correspondence. Personal inspection will convince you of merits. One price, $1,500 cash. M. J. Regan, Coffeyville, Kansas.

For Sale—Maps

NEW MEXICO TOWNSHIP PLATS, $1.00 each; 4 in same area $3.50 covering all LEA, Eastern ROOSEVELT and EDDY COUNTIES—showing ownership and OIL DEVELOPMENT.
ZINGERY OIL MAP COMPANY
Fair Bldg. Fort Worth, Tex.

Legal Blanks

SINCE 1908 Burkhart's legal forms—servicing Mid-Cont. oil fields, including Ill., La., Mo., Ind. & Ky. Free catalog & samples. Burkhart Ptg. & Sta. Co., 115 So. Cinn., Tulsa, Okla.

Mailing Lists

ROYALTY Lists. Oil Investor Lists. Stockholders Lists. By states. Oil Industry Mailing List Co., Tulsa Loan Bldg., Tulsa, Oklahoma.

Oil Industry Printing

OIL FIELD LEGAL BLANKS
Leases, assignments, releases, township plat books, well records, etc. Request on your letterhead gets free catalog. Olds Press, 215 East Third St., Tulsa, Okla.

CLASSIFIED ADVERTISING RATES

Classified advertising rates: First insertion, 35 cents a line; each additional insertion, 25 cents a line, PAYABLE IN ADVANCE. Six words usually make a line. Count as a word each one-letter word and each group of figures. White-space computed at regular line rate. Allow two extra lines for blind ads. Ads of less than three lines not accepted. No formal acknowledgment is made, and proofs cannot be shown in advance of publication.

	1 time	2 times	3 times	4 times
3 Lines	$1.05	$1.80	$2.55	$3.30
4 Lines	1.40	2.40	3.40	4.40
5 Lines	1.75	3.00	4.25	5.50
6 Lines	2.10	3.60	5.10	6.60
7 Lines	$2.45	$4.20	$5.95	$7.70
8 Lines	2.80	4.80	6.80	8.80
9 Lines	3.15	5.40	7.65	9.90
10 Lines	3.50	6.00	8.50	11.00

CLASSIFIED DISPLAY RATES

Classified Display is set with a border and may be used in one or two column sizes.

1 Inch	1 time	$5.00
1 Inch	13 times	4.50 per inch
1 Inch	26 times	4.00 per inch
1 Inch	52 times	3.50 per inch

This space may be contracted for over a period of one year from the date of the first insertion and is PAYABLE IN ADVANCE, MONTHLY.

We reserve the right to withhold all advertising of questionable character. To avoid delay be sure to send remittance with copy. We will set your ad in the smallest amount of space possible and refund all overpayments. One-time insertions will not be run until fully paid. Forms close MONDAY NOON before each issue date.

THE OIL AND GAS JOURNAL
Tulsa, Oklahoma

CLASSIFIED ADVERTISING

For Sale—Equipment For Sale—Equipment For Sale—Equipment For Sale—Equipment

COMPLETE KELLOGG CRACKING UNIT

3000 bbl. cap. Kellogg Cracking Unit—Two Furnaces—Pacific Centrifugal Charging Pumps all Complete.

Will sell "as is and where is" or take turnkey job for dismantling and reerection.

Send us your inquiries.

PRICED FOR IMMEDIATE SALE

SONKEN-GALAMBA SUPPLY COMPANY

W. C. Berry or H. J. Galamba,
Riverview at Second, Kansas City, Kansas

Robt. W. Duden,
2100 S. Union, Tulsa, Oklahoma

Incorporations

DELAWARE CHARTERS: Complete service $35. Submitted forms. Chas. G. Guyer, Inc., Wilmington, Delaware.

CHARTERS — Delaware best, quickest, cheapest, more liberal. Free forms. Colonial Charter Co., Wilmington, Del.

Money Raising

WANT CAPITAL to invest in perpetual mineral rights in North Permian Basin in Texas and New Mexico in major company blocks on geophysical highs. Rapid development under way now. Will take interest after all monies have been repaid. Address, Box J-990, The Oil and Gas Journal, Tulsa, Okla.

Survey Service

REMEMBER EAST TEXAS
When all other methods fail, employ my divining or dowsing method. If oil exists this method finds it. Faults, broken, treacherous areas accurately defined. Our Watson #2, first producer Wilmington, Calif. field, located by this method. More reliable than mechanical geophysics. Ask any unbiased oil authority. Many years' experience. A wise man investigates. George Miller, 1548 Post, Torrance, Calif.

Financing

CAPITAL SEEKERS
Put your project before 260 Key-Men. Cost trifling. Details free. AMSTER LEONARD, Fox Theater Building, Detroit, Michigan.

AMERICA'S 83 leading underwriters who bought a billion of securities 1938. $3.00. JOHN MORRIS, 1040 South Paxon, Philadelphia, Penna.

Business Opportunities

WANTED—Partner to take half working interest 78-acre lease Kentucky shallow field. Will sell half, including first well to top sand, for $1,500.00. Three offsets. No proration. References. Address Box K-151, The Oil and Gas Journal, Tulsa, Okla.

I OWN franchise rights for State of Pennsylvania for patented process to rejuvenate low producing oil wells, long recognized as only correct method. Same process opens up four other distinct fields in production of manufactured Natural gas and auto-fuel, each of which have possibilities of highest merit. Plant in Jersey City showing complete demonstration. Want party with $25,000 or more to join in these developments, and share value of franchises with me. Address Box K-161, The Oil and Gas Journal, Tulsa, Okla.

WANTED GAS PROPOSITION

I am reclaiming complete gas property, many miles of pipe from 2" to 12", gas engine driven compressors, orifice and domestic meters, regulators, etc.

Would be interested in attractive propositions in which this material could be used in supplying either domestic or industrial load.

Address with full details.
Box K-164,
The Oil and Gas Journal,
Tulsa, Okla.

For Sale—Equipment

FOR SALE: Two 6' x 42' Smithwe.. Pressure vessels with 3" wall. The National Refining Co., Hanna Bldg., Cleveland, Ohio.

FOR SALE OR LEASE—Class E Sanderson Cyclone 1,500-ft. drilling machine located in Ohio. Address Box K-123, The Oil and Gas Journal, Tulsa, Okla.

FOR SALE—1-10,000 bbl. bolted Tank. Also equipment for both 1,000 and 2,000 bbl. Skimming Plants. Western Tank & Road Supply Co., Wichita, Kansas.

FOR SALE: 15,000 ft. 4" O. D. Flues. Absolutely number one. Price 10c cash. M. J. REGAN, Coffeyville, Kansas.

FOR SALE — Wilson Winch used in Okla. City field. Also spudding attachment and all tools necessary for drilling, cleaning out, swabbing, or drilling in well. Also lighting equipment, steel dog house, etc. Winch mounted on 7 ton Mack truck. Ray Holman, 320 S.E. 36th St., Phone 7-2669, Oklahoma City, Okla.

4—17½ x 20, 1—7½ x 20 Bessemer; 2—5½ x 20, 2—7¼ x 20 Clark Compressor Cylinders in A-1 Condition.
NOLAN SALES CORPORATION
Tulsa, Okla. —— Seminole, Okla.

25 K.W. and 40 K.W. Gas Engines, 220 volts, D.C. Two 100 K.W. Gas Engine-Generator Sets, 220 volts, D.C. 7x6 Ingersoll-Rand ER-1 Air compressor. Six-inch Oster Pipe Threading Machine. Also large stock of lathes, pipe machines, milling machines, etc. Send for our list.
Terms to suit.
CINCINNATI MACHINERY & SUPPLY CO.
26 West 2nd St. Cincinnati, Ohio

For Sale—Equipment

FOR SALE—SACRIFICE PRICE

TEN Complete Rotary Drilling Rigs. Steam and Diesel Powered. Large and Small.

Large Amount of Extra Drilling Equipment, Boilers, Engines, Pumps, etc.

TEN White Trucks Equipped for Oil Field Hauling.

All equipment in good condition and modern. Will sell any part or all. Especially suited for foreign country. Write me your wants.

ED. BRIGHT
606 N. Field St. Dallas, Texas

225,000-GALLON oil jobbing plant equipped to blend motor oil and manufacture greases. Gasoline and kerosene storage. Ready for operation. Located Tulsa, Okla. Box 284.

FOR SALE—One Wilson Giant winch powered by P A 100 International motor. Perfect working condition. Earl H. Carter, Box 1227, Shreveport, La.

FOR SALE

50,000 feet of 2" line pipe.
20,000 feet of 6" line pipe.
Located in Oklahoma.

We also have in Shreveport, Louisiana, a complete stock in all sizes —Line Pipe, Casing, Drill Pipe.

Branches in La-Ark-Tex area; also at St. Elmo, Illinois.

Wire, write or phone.

Louisiana Iron & Supply Company
Shreveport, Louisiana

Equipment Wanted

WANTED: 1 good used 18' National double eccentric band wheel unit with 35 HP oil field type engine, power house, circulating tank, etc. Must be worth the money and in good condition.
W. T. Waggoner Estate, Vernon, Texas.

WANTED—Second hand Wilson-Snyder, Gardner-Denver or Union Tool 14 or 16 power pump. Full particulars first letter. R. C. Halstead, 612 Gulf States Building, Dallas, Texas.

CALIFORNIA OIL FIELD DEVELOPMENT FOR APRIL

	New rigs up	Active drilling	Producers completed	Daily initial output	Active producing	Abd. wells: Drillers	Abd. wells: Producers
Group 1:							
Arvin	1	2	1	780	2	..	..
Belridge—North	1	4	2	1,624	65	1	..
Belridge—South	..	..	..	.....	88	3	..
Canal	2	2	2	3,462	21	..	..
Canfield Ranch	..	..	..	.....	1	..	..
Coalinga	6	10	6	16,087	783	2	..
Cole's Levee	1	4	..	.....	2	..	..
Edison	..	..	..	.....	87	1	1
Elk Hills	..	..	..	.....	169	..	..
Fruitvale	1	4	..	.....	172	2	..
Greeley	2	5	..	.....	14	1	..
Kern River	2	4	3	32	1,287	5	1
Kettleman Middle Dome	..	..	..	.....	3	..	..
Kettleman North Dome	3	13	4	8,019	216	1	..
Lost Hills	1	1	..	.....	245	..	..
McKittrick	..	1	1	45	199	3	..
Midway-Sunset	3	5	1	255	2,501	4	1
Mountain View	..	..	..	.....	179	..	2
Mount Poso	2	5	1	380	286	3	..
Rio Bravo	..	3	1	1,690	28	..	..
Round Mountain	2	1	1	80	204	2	..
Ten Section	1	1	1	3,580	30	..	..
Tupman	..	1	1	1,592	2	..	..
Wasco	1	1	1	5,000	5	..	..
Wheeler Ridge	..	..	..	.....	33	..	..
Group 2:							
Capitan	..	1	..	.....	48	..	..
Elwood	..	..	..	.....	81	..	..
Rincon	3	1	1	689	54	..	..
San Miguelito	..	2	..	.....	20	..	..
Santa Barbara	..	..	..	.....	26	..	6
Santa Maria	1	2	1	3,380	306	..	1
Summerland	1	1	..	.....	19	..	..
Ventura Avenue	..	11	2	4,448	268	..	..
Ventura-Newhall	5	13	1	1,986	551	1	1
Watsonville	..	..	..	.....	7	..	..
Group 3:							
Brea-Olinda	..	..	..	.....	351	..	..
Coyote—East	2	1	..	.....	85	..	..
Coyote—West	..	1	1	1,050	48	..	..
Dominguez	2	4	..	.....	181	..	..
El Segundo	..	..	..	.....	50	..	..
Huntington Beach	3	3	2	291	552	..	1
Inglewood	..	..	..	.....	206	..	..
Lawndale	..	..	..	.....	6	..	..
Long Beach	..	1	..	.....	1,237	..	1
Los Angeles-Salt Lake	..	..	..	.....	112	..	..
Montebello	2	10	8	5,668	232	..	..
Playa Del Rey	1	1	..	.....	184	..	1
Potrero	..	..	1	356	15	..	..
Richfield	..	..	..	.....	297	1	..
Rosecrans	3	6	2	1,022	127	..	1
Santa Fe Springs	..	..	..	.....	569	..	2
Seal Beach	..	1	..	.....	101	..	1
Torrance	3	6	20	5,303	720	1	2
Whittier	..	..	..	.....	151	..	..
Wilmington	27	15	13	5,144	628	..	..
Miscellaneous drilling	6	27	..	.....	.....	14	..
Group 4—gas fields:							
Buena Vista Lake	..	..	..	.....	4	..	..
Buttonwillow	..	..	..	.....	10	..	..
Delano	1	1	..	.....	.....	..	..
Goleta	1	1	..	.....	.....	..	..
Marysville Buttes	1	1	..	.....	2	..	..
McDonald Island	..	..	..	.....	4	..	..
Rio Vista	..	..	..	.....	22	..	..
Tracy	..	..	..	.....	1	..	..
Total April	91	177	78	71,963	13,897	45	22
Total March	73	176	58	53,034	13,909	19	28
Increase (*decrease)	18	1	20	18,929	*12	26	*6

STOCKS HELD IN PACIFIC COAST TERRITORY BY CALIFORNIA OIL COMPANIES

	Apr. 30, 1939	Mar. 31, 1939	April changes	Dec. 31, 1938 (reclassified)
1 Gasoline-bearing crude	39,530,900	39,215,749	+ 315,151	36,225,312
2 Nongasoline-bearing crude	15,195,794	15,808,425	—612,631	16,282,177
3 Unblended natural gasoline	2,201,339	2,137,837	+ 63,502	2,699,455
4 Gasoline (not including distributing and service stations)	15,400,469	15,805,417	—404,948	13,259,369
5 Naphtha distillates	*1,407,569	*1,384,449	+ 23,120	*1,566,349
6 Gas oil and Diesel fuel	10,826,518	10,382,404	+ 444,114	10,539,937
7 Fuel oil residuum	70,877,903	70,551,947	+ 325,956	70,957,881
8 All other stocks	‡6,656,202	‡6,306,740	+ 349,462	‡6,153,809
Total	162,096,694	161,592,968	+ 503,726	157,684,289
*Estimated amount of unfinished gasoline contained in item No. 5	1,210,404	1,184,846		1,350,379
‡Coke included in item No. 8	222,379	189,832		92,066

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